

## LLNL Livermore Site Third Quarter 2009 Self-Monitoring Report

The following is the third quarter 2009 self-monitoring data report for the treatment facilities and Lake Haussmann at the Lawrence Livermore National Laboratory (LLNL) Livermore Site.

In agreement with the recently established Federal Facility Agreement (FFA) Remedial Action Implementation Plan (RAIP) the following treatment facilities were restarted during the quarter to meet the September 30, 2009 FFA milestones: TFD-HPD, VTFD-ETCS, VTFD-HPD, VTFD-HS, TFE-E, VTFE-ELM, VTFE-HS, TFG-N, and TF518-PZ are now operational and the December 31, 2009 FFA restart milestones were met ahead of schedule. Additionally, VTF518-PZ is operational and restarted ahead of the March 31, 2010 FFA milestone. The following facilities continued to operate during the third quarter 2009: TFA, TFA-E, TFB, TFC, TFC-E, TFC-SE, TFD, TFD-E, TFD-S, TFD-SE, TFD-SS, TFD-W, TFE-HS, TFE-NW, TFE-SE, TFE-SW, TFE-W, TFG-1, TF406, TF406-NW, VTF406-HS, TF5475-2, and VTF511. TFA West was shutdown in January 2008 after a year-long treatability test and is operational only during monthly sampling events.

The volumes of ground water and soil vapor treated and volatile organic compound (VOC) mass removed during the third quarter of 2009 are presented in Tables 1 and 2, respectively. An historical summary of VOC volume and mass removed are presented in Tables 3 and 4, respectively.

Attachment A presents ground water treatment facility and extraction well (ground water and soil vapor) VOC, chromium, bioassay, turbidity and chloride analyses (Tables A-1 through A-5). During the third quarter of 2009, all effluent sample analyses were within acceptable discharge limits. An addendum presenting analytical results from extraction wells associated with treatment facilities that were restarted during this reporting period and nearby monitor wells is included at the end of Attachment A.

Self-monitoring reports for all treatment facilities are presented in Attachment B. Monthly volumes of ground water extracted are shown in Attachment B; however, instantaneous flow rates are not shown for wells that are now only used for sampling and are not continuously pumped. The monthly volume shown for these wells is the quantity of water evacuated for sampling purposes. Monitoring data for Lake Haussmann are presented in Attachment C.

A well location map showing wells and treatment facilities, and ground water elevation contour maps showing hydraulic capture zones for hydrostratigraphic units (HSUs) 1B, 2, 3A, 3B, 4, and 5, are presented in Attachment D. There were no new monitoring wells installed during this reporting period. The contour maps for the individual HSUs are based on data mostly collected during July 2009, prior to the restart of TFD-HPD, VTFD-ETCS, VTFD-HPD, VTFD-HS, TFE-E, VTFE-ELM, VTFE-HS, TFG-N, TF518-PZ, and VTF518-PZ.

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**Table 1. Volumes of ground water and soil vapor extracted and treated at the Livermore Site, July through September 2009.**

Treatment Area <sup>a</sup>	Month	Volume of ground water extracted (Kgal) <sup>b</sup>	Volume of vapor extracted (Kft <sup>3</sup> ) <sup>b</sup>
TFA	July	7,488	-
	August	8,078	-
	September	7,354	-
TFB	July	2,554	-
	August	2,532	-
	September	2,357	-
TFC	July	4,367	-
	August	3,746	-
	September	1,416	-
TFD	July	3,926	673
	August	3,951	961
	September	4,007	1,393
TFE	July	2,007	0
	August	2,167	600
	September	2,268	1,969
TFG	July	425	-
	August	463	-
	September	639	-
TFH	July	1,044	2,223
	August	961	2,170
	September	1,108	2,088
<b>TOTAL<sup>c</sup></b>		<b>62,858</b>	<b>12,077</b>

<sup>a</sup> Totals include ground water and soil vapor extracted from the following facilities:

TFA area: TFA, TFA-E, TFA-W

TFB area: TFB

TFC area: TFC, TFC-E, TFC-SE

TFD area: TFD, TFD-E, TFD-HPD, TFD-S, TFD-SE, TFD-SS, TFD-W, VTFD-ETCS, VTFD-HPD, VTFD-HS

TFE area: TFE-E, TFE-HS, TFE-NW, TFE-SE, TFE-SW, TFE-W, VTFE-ELM, VTFE-HS

TFG area: TFG-1, TFG-N

TFH area: TF406, TF406-NW, TF518-N, TF518-PZ, TF5475-1, TF5475-2, TF5475-3, VTF406-HS, VTF511, VTF518-PZ, VTF5475

TFF started operation in February 1993 for fuel hydrocarbon remediation. In August 1995, the regulatory agencies agreed that the vadose zone remediation was complete, and in October 1996 a No Further Action status was granted for the ground water.

<sup>b</sup> Totals are derived from individual extraction wells shown in Attachment B

<sup>c</sup> Rounded number

Kft<sup>3</sup> = thousands of cubic feet

Kgal = thousands of gallons

**Table 2.** VOC mass removed at the Livermore Site, July through September 2009.

Treatment Area <sup>a</sup>	VOC mass removed from ground water (kg)	VOC mass removed from soil vapor (kg)	Total VOC mass removed (kg) <sup>b</sup>
TFA	1.1	-	1.1
TFB	0.8	-	0.8
TFC	1.5	-	1.5
TFD	7.8	1.2	9.0
TFE	1.7	0.7	2.4
TFG	0.1	-	0.1
TFH	1.2	13.3	14.5
<b>TOTAL<sup>b</sup></b>	<b>14.2</b>	<b>15.2</b>	<b>29.4</b>

**Table 3.** Historical summary of volumes of water and soil vapor removed at the Livermore Site through September 2009.

Treatment Area <sup>a</sup>	Volume of ground water extracted (Mgal)	Volume of vapor extracted (Kft <sup>3</sup> )
TFA	1,618	-
TFB	379	-
TFC	390	-
TFD	851	52,735
TFE	312	126,792
TFG	61	-
TFH	137	175,787
<b>TOTAL<sup>b</sup></b>	<b>3,748</b>	<b>355,314</b>

**Table 4.** Historical summary of VOC mass removed from water and soil vapor at the Livermore Site through September 2009.

Treatment Area <sup>a</sup>	VOC mass removed from ground water (kg)	VOC mass removed from soil vapor (kg)	Total VOC mass removed (kg) <sup>b</sup>
TFA	197	-	197
TFB	74	-	74
TFC	92	-	92
TFD	782	86	868
TFE	199	142	341
TFG	10	-	10
TFH	31	1,149	1,180
<b>TOTAL<sup>b</sup></b>	<b>1,385</b>	<b>1,377</b>	<b>2,762</b>

<sup>a</sup> Refer to Table 1 footnote for facilities in each treatment facility area.<sup>b</sup> Rounded number.

Abbreviations for Tables 2, 3 and 4:

Kft<sup>3</sup> = thousands of cubic feet.

Kg = Kilograms.

Mgal = millions of gallons.

VOC = Volatile organic compound.

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**Attachment A**

**VOC, Chromium, Bioassay,  
Turbidity, and Chloride Analyses**

**Table A-1. VOC analyses of influent and effluent samples by treatment facility.**

Sample Station	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFA</b>													
TFA-I001	06-JUL-09	E601	<0.5	<b>0.64</b>	<b>0.64</b>	<0.5	<b>0.95</b>	<1	<0.5	<b>7.6</b>	<0.5	<b>0.85</b>	<0.5
TFA-I001	03-AUG-09	E601	<0.5	<b>1.2</b>	<b>0.68</b>	<0.5	<b>1.5</b>	<1	<0.5	<b>8.6</b>	<0.5	<b>0.9</b>	<0.5
TFA-I001	01-SEP-09	E601	<0.5	<b>1.1</b>	<b>0.6</b>	<0.5	<b>1.3</b>	<1	<0.5	<b>8.1</b>	<0.5	<b>0.81</b>	<0.5
TFA-E001	06-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFA-E001	03-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFA-E001	01-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFA-E</b>													
W-254	08-JUL-09	E601	<0.5	<0.5	<b>0.5</b>	<0.5	<b>0.78</b>	<1	<0.5	<b>50</b>	<0.5	<b>1.7</b>	<0.5
STU06-I	04-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<b>0.78</b>	<1	<0.5	<b>50</b>	<0.5	<b>1.3</b>	<0.5
STU06-I	02-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<b>0.84</b>	<1	<0.5	<b>49</b>	<0.5	<b>1.2</b>	<0.5
STU06-E	08-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
STU06-E	04-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
STU06-E	02-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFA-W<sup>ab</sup></b>													
W-404	11-AUG-09	E601	<0.5	<0.5	<b>1.4</b>	<0.5	<b>2.3</b>	<1	<0.5	<b>8.9</b>	<0.5	<0.5	<0.5
W-404	14-SEP-09	E601	<0.5	<0.5	<b>1.4</b>	<0.5	<b>2.6</b>	<1	<0.5	<b>9.1</b>	<0.5	<0.5	<0.5
TFA-W-E	12-AUG-09	E624	<1	<1	<b>1.4</b>	<1	<b>2.3</b>	<1	<1	<b>8.8</b>	<1	<b>0.67</b>	<1
<b>TFB</b>													
TFB-I002	06-JUL-09	E601	<b>0.66</b>	<b>2.4</b>	<0.5	<0.5	<b>1.7</b>	<1	<b>4.5</b>	<b>1.6</b>	<0.5	<b>16</b>	<0.5
TFB-I002	03-AUG-09	E601	<b>0.61</b>	<b>2.4</b>	<0.5	<0.5	<b>1.8</b>	<1	<b>4</b>	<b>1.8</b>	<0.5	<b>15</b>	<0.5
TFB-I002	01-SEP-09	E601	<b>0.58</b>	<b>2.3</b>	<0.5	<0.5	<b>1.8</b>	<1	<b>4</b>	<b>1.7</b>	<0.5	<b>16</b>	<0.5
TFB-E002	06-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFB-E002	03-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFB-E002	01-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFC</b>													
TFC-I003	06-JUL-09	E601	<0.5	<b>1.3</b>	<0.5	<0.5	<b>1</b>	<1	<b>13</b>	<b>4.4</b>	<0.5	<b>14</b>	<0.5
TFC-I003	03-AUG-09	E601	<0.5	<b>1.4</b>	<0.5	<0.5	<b>1</b>	<1	<b>12</b>	<b>4.8</b>	<0.5	<b>13</b>	<0.5
TFC-I003	22-SEP-09	E601	<0.5	<b>1.2</b>	<0.5	<0.5	<b>0.65</b>	<1	<b>12</b>	<b>4.7</b>	<0.5	<b>12</b>	<0.5
TFC-E003	06-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFC-E003	03-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

**Table A-1. VOC analyses of influent and effluent samples by treatment facility.**

Sample Station	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFC (cont.)</b>													
TFC-E003	22-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFC-E</b>													
MTU1-I	13-JUL-09	E601	<0.5	<b>18</b>	<0.5	<0.5	<b>1.1</b>	<1	<b>12</b>	<b>0.61</b>	<0.5	<b>11</b>	<b>4.6</b>
MTU1-I	13-AUG-09	E601	<0.5	<b>17</b>	<0.5	<0.5	<b>1.2</b>	<1	<b>10</b>	<b>0.56</b>	<0.5	<b>9.3</b>	<b>4.5</b>
MTU1-I	29-SEP-09	E601	<0.5	<b>16</b>	<0.5	<0.5	<b>0.95</b>	<1	<b>11</b>	<b>0.63</b>	<0.5	<b>9.1</b>	<b>3.5</b>
MTU1-E	13-JUL-09	E601	<0.5	<b>0.85</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU1-E	13-AUG-09	E601	<0.5	<b>0.63</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU1-E	29-SEP-09	E601	<0.5	<b>0.72</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFC-SE</b>													
PTU1-I	07-JUL-09	E601	<0.5	<b>8.3</b>	<0.5	<0.5	<b>2.8</b>	<1	<b>14</b>	<0.5	<0.5	<b>20</b>	<b>1.1</b>
PTU1-I	05-AUG-09	E601	<0.5	<b>8.1</b>	<0.5	<0.5	<b>2.9</b>	<1	<b>15</b>	<b>0.52</b>	<0.5	<b>19</b>	<b>1.2</b>
PTU1-I	01-SEP-09	E601	<0.5	<b>7.1</b>	<0.5	<0.5	<b>2.8</b>	<1	<b>13</b>	<0.5	<0.5	<b>18</b>	<b>0.99</b>
PTU1-E	07-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU1-E	05-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU1-E	01-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFD</b>													
TFD-I004	13-JUL-09	E601	<b>0.83</b>	<b>1.4</b>	<0.5	<0.5	<b>0.65</b>	<1	<0.5	<b>1.2</b>	<0.5	<b>29</b>	<0.5
TFD-I004	05-AUG-09	E601	<0.5	<b>0.67</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>3.5</b>	<0.5
TFD-I004	08-SEP-09	E601	<b>2.7</b>	<b>1.7</b>	<0.5	<0.5	<b>0.7</b>	<1	<b>0.62</b>	<b>0.98</b>	<0.5	<b>58</b>	<b>38</b>
TFD-E004	13-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-E004	05-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-E004	08-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFD-E</b>													
PTU8-I	08-JUL-09	E601	<b>6.1</b>	<b>2.7</b>	<b>1.1</b>	<b>4.4</b>	<b>11</b>	<1	<b>0.76</b>	<b>16</b>	<0.5	<b>140</b>	<0.5
PTU8-I	04-AUG-09	E601	<b>6</b>	<b>2.3</b>	<b>0.61</b>	<b>2.6</b>	<b>3.8</b>	<1	<b>0.91</b>	<b>13</b>	<0.5	<b>96</b>	<0.5
PTU8-I	04-SEP-09	E601	<b>4.7</b>	<b>2.5</b>	<b>0.6</b>	<b>2.4</b>	<b>8.6</b>	<1	<0.5	<b>12</b>	<0.5	<b>100</b>	<0.5
PTU8-E	08-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU8-E	04-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU8-E	04-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

**Table A-1. VOC analyses of influent and effluent samples by treatment facility.**

Sample Station	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub>	1,1-DCA	1,2-DCA	1,1-DCE ug/L (ppb)	1,2-DCE	Freon 113	PCE	1,1,1-TCA	TCE	Freon 11 >
<b>TFD-HPD<sup>cd</sup></b>													
PTU10-I	04-SEP-09	E601	<b>4.2</b>	<b>1.6</b>	<0.5	<0.5	<0.5	<1	<b>0.57</b>	<0.5	<0.5	<b>130</b>	<0.5
PTU10-I	08-SEP-09	E601	<b>4.2</b>	<b>1.6</b>	<0.5	<0.5	<0.5	<1	<b>0.67</b>	<0.5	<0.5	<b>140</b>	<0.5
PTU10-I	09-SEP-09	E601	<b>4</b>	<b>1.6</b>	<0.5	<0.5	<0.5	<1	<b>0.65</b>	<0.5	<0.5	<b>130</b>	<0.5
PTU10-I	24-SEP-09	E601	<b>2.3</b>	<b>0.96</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>73</b>	<0.5
PTU10-E	04-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU10-E	09-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU10-E	24-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFD-S</b>													
PTU2-I	22-JUL-09	E601	<b>2.4</b>	<b>2.2</b>	<0.5	<b>0.5</b>	<b>9.7</b>	<1	<b>2.2</b>	<b>9.6</b>	<0.5	<b>140</b>	<0.5
PTU2-I	13-AUG-09	E601	<b>2.2</b>	<b>2.2</b>	<0.5	<b>0.53</b>	<b>8.8</b>	<1	<b>1.8</b>	<b>8.8</b>	<0.5	<b>140</b>	<0.5
PTU2-I	09-SEP-09	E601	<b>2.2</b>	<b>2.5</b>	<0.5	<b>0.57</b>	<b>9.3</b>	<1	<b>2.1</b>	<b>10</b>	<0.5	<b>130</b>	<0.5
PTU2-E	22-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU2-E	13-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU2-E	09-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFD-SE</b>													
PTU11-I	07-JUL-09	E601	<b>0.78</b>	<b>1.7</b>	<b>2.4</b>	<b>6.9</b>	<b>34</b>	<b>1.4</b>	<0.5	<b>86</b>	<0.5	<b>240</b>	<0.5
PTU11-I	04-AUG-09	E601	<b>1.6</b>	<b>8.2</b>	<b>2.1</b>	<b>7.9</b>	<b>47</b>	<b>1.3</b>	<b>1.8</b>	<b>100</b>	<0.5	<b>340</b>	<0.5
PTU11-I	04-SEP-09	E601	<b>1.2</b>	<b>6.3</b>	<b>1.8</b>	<b>6.4</b>	<b>39</b>	<b>1.1</b>	<b>1.4</b>	<b>95</b>	<0.5	<b>260</b>	<0.5
PTU11-E	07-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU11-E	04-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU11-E	04-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFD-SS</b>													
PTU12-I	22-JUL-09	E601	<b>3.7</b>	<b>2.2</b>	<0.5	<b>1.2</b>	<b>8.5</b>	<1	<b>0.94</b>	<b>16</b>	<0.5	<b>110</b>	<b>6.3</b>
PTU12-I	13-AUG-09	E601	<b>3.2</b>	<b>1.9</b>	<0.5	<b>1</b>	<b>7.5</b>	<1	<b>0.72</b>	<b>15</b>	<0.5	<b>110</b>	<b>4.6</b>
PTU12-I	10-SEP-09	E601	<b>3.3</b>	<b>2.8</b>	<0.5	<b>1.5</b>	<b>10</b>	<1	<b>0.95</b>	<b>21</b>	<0.5	<b>120</b>	<b>4.4</b>
PTU12-E	22-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU12-E	13-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU12-E	10-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFD-W</b>													
PTU6-I	22-JUL-09	E601	<b>0.59</b>	<b>3.4</b>	<0.5	<0.5	<0.5	<1	<b>0.6</b>	<0.5	<0.5	<b>7.1</b>	<b>86</b>
PTU6-I	13-AUG-09	E601	<b>0.58</b>	<b>2.9</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>6.9</b>	<b>78</b>

**Table A-1. VOC analyses of influent and effluent samples by treatment facility.**

Sample Station	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFD-W (cont.)</b>													
PTU6-I	09-SEP-09	E601	<b>0.61</b>	<b>3.4</b>	<0.5	<0.5	<0.5	<1	<b>0.5</b>	<0.5	<0.5	<b>7.1</b>	<b>85</b>
PTU6-E	22-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU6-E	13-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU6-E	09-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFE-E<sup>e</sup></b>													
PTU3-I	28-JUL-09	E601	<0.5	<b>3.3</b>	<0.5	<0.5	<b>22</b>	<1	<b>10</b>	<b>35</b>	<0.5	<b>110</b>	<0.5
PTU3-I	29-JUL-09	E601	<0.5	<b>3.1</b>	<0.5	<0.5	<b>22</b>	<1	<b>9.6</b>	<b>31</b>	<0.5	<b>110</b>	<0.5
PTU3-I	30-JUL-09	E601	<0.5	<b>2.8</b>	<0.5	<0.5	<b>20</b>	<1	<b>9.4</b>	<b>32</b>	<0.5	<b>120</b>	<0.5
PTU3-I	12-AUG-09	E601	<0.5	<b>2.4</b>	<0.5	<0.5	<b>4.1</b>	<1	<b>7.9</b>	<b>5.1</b>	<0.5	<b>50</b>	<0.5
PTU3-I	02-SEP-09	E601	<0.5	<0.5	<b>0.52</b>	<0.5	<b>45</b>	<1	<b>8.7</b>	<b>84</b>	<0.5	<b>200</b>	<0.5
PTU3-E	28-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU3-E	12-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU3-E	02-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFE-HS<sup>f</sup></b>													
GTU07-I	10-AUG-09	E601	<b>1.3</b>	<b>2</b>	<0.5	<0.5	<b>6.9</b>	<b>1.8</b>	<b>6.8</b>	<b>12</b>	<0.5	<b>220</b>	<0.5
GTU07-I	09-SEP-09	E601	<b>1.7</b>	<b>2.7</b>	<0.5	<0.5	<b>8.6</b>	<b>2.2</b>	<b>6.9</b>	<b>11</b>	<0.5	<b>210</b>	<0.5
GTU07-E	10-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU07-E	09-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFE-NW</b>													
PTU9-I	20-JUL-09	E601	<b>0.6</b>	<b>3.2</b>	<0.5	<0.5	<0.5	<1	<b>0.96</b>	<0.5	<0.5	<b>12</b>	<0.5
PTU9-I	11-AUG-09	E601	<b>0.53</b>	<b>3.3</b>	<0.5	<0.5	<0.5	<1	<b>0.81</b>	<0.5	<0.5	<b>11</b>	<0.5
PTU9-I	10-SEP-09	E601	<b>0.58</b>	<b>3.5</b>	<0.5	<0.5	<0.5	<1	<b>0.92</b>	<0.5	<0.5	<b>11</b>	<0.5
PTU9-E	20-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU9-E	11-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU9-E	10-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFE-SE</b>													
W-359	20-JUL-09	E601	<b>2.6</b>	<0.5	<0.5	<0.5	<b>9.7</b>	<1	<b>10</b>	<b>7.2</b>	<0.5	<b>98</b>	<b>0.73</b>
W-359	17-AUG-09	E601	<b>2.3</b>	<0.5	<0.5	<0.5	<b>9.5</b>	<1	<b>8.6</b>	<b>5.2</b>	<0.5	<b>73</b>	<b>0.55</b>
MTU04-I	12-AUG-09	E601	<b>2.6</b>	<0.5	<0.5	<0.5	<b>11</b>	<1	<b>10</b>	<b>5.7</b>	<0.5	<b>80</b>	<b>0.59</b>
MTU04-I	03-SEP-09	E601	<b>2.5</b>	<0.5	<0.5	<0.5	<b>13</b>	<1	<b>11</b>	<b>5.8</b>	<0.5	<b>81</b>	<b>0.61</b>
MTU04-E	20-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

**Table A-1. VOC analyses of influent and effluent samples by treatment facility.**

Sample Station	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFE-SE (cont.)</b>													
MTU04-E	12-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU04-E	03-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFE-SW</b>													
MTU03-I	01-JUL-09	E601	<b>8.3</b>	<b>5.3</b>	<0.5	<b>1.6</b>	<b>4.3</b>	<b>4.3</b>	<0.5	<b>6.2</b>	<0.5	<b>240</b>	<0.5
MTU03-I	04-AUG-09	E601	<b>8.2</b>	<b>5.1</b>	<b>0.52</b>	<b>1.5</b>	<b>6.9</b>	<b>5.7</b>	<b>0.78</b>	<b>7.8</b>	<0.5	<b>220</b>	<0.5
MTU03-I	01-SEP-09	E601	<b>4.4</b>	<b>3</b>	<0.5	<b>0.9</b>	<b>4.3</b>	<b>3.8</b>	<b>0.62</b>	<b>4.1</b>	<0.5	<b>96</b>	<0.5
MTU03-E	01-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU03-E	04-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU03-E	01-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFE-W</b>													
MTU05-I	06-JUL-09	E601	<0.5	<b>0.98</b>	<0.5	<0.5	<b>2</b>	<b>2.4</b>	<b>13</b>	<b>4.7</b>	<0.5	<b>32</b>	<0.5
MTU05-I	05-AUG-09	E601	<0.5	<b>1.1</b>	<0.5	<0.5	<b>2.3</b>	<b>1.4</b>	<b>14</b>	<b>5.1</b>	<0.5	<b>29</b>	<0.5
MTU05-I	01-SEP-09	E601	<0.5	<b>0.96</b>	<0.5	<0.5	<b>2.2</b>	<b>1.3</b>	<b>13</b>	<b>5</b>	<0.5	<b>28</b>	<0.5
MTU05-E	06-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU05-E	05-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU05-E	01-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFG-1</b>													
W-1111	23-JUL-09	E601	<b>3</b>	<b>9.3</b>	<0.5	<0.5	<b>1.1</b>	<1	<b>0.55</b>	<b>1.2</b>	<0.5	<b>3.8</b>	<0.5
GTU01-I	17-AUG-09	E601	<b>2.7</b>	<b>8.1</b>	<0.5	<0.5	<b>0.93</b>	<1	<0.5	<b>1.2</b>	<0.5	<b>3.5</b>	<0.5
GTU01-I	08-SEP-09	E601	<b>2.8</b>	<b>9.3</b>	<0.5	<0.5	<b>1.1</b>	<1	<b>0.52</b>	<b>1.2</b>	<0.5	<b>3.7</b>	<0.5
GTU01-E	23-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU01-E	17-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU01-E	08-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TFG-N<sup>g</sup></b>													
MTU02-I	23-JUL-09	E601	<0.5	<b>5.2</b>	<0.5	<0.5	<0.5	<1	<b>0.62</b>	<b>9.6</b>	<0.5	<b>2.1</b>	<0.5
MTU02-I	24-JUL-09	E601	<0.5	<b>5.1</b>	<0.5	<0.5	<0.5	<1	<b>0.6</b>	<b>9.1</b>	<0.5	<b>2</b>	<0.5
MTU02-I	27-JUL-09	E601	<0.5	<b>5.4</b>	<0.5	<0.5	<0.5	<1	<b>0.65</b>	<b>9.6</b>	<0.5	<b>2.2</b>	<0.5
MTU02-I	12-AUG-09	E601	<0.5	<b>8.1</b>	<0.5	<0.5	<0.5	<1	<0.5	<b>10</b>	<0.5	<b>1.7</b>	<0.5
MTU02-I	02-SEP-09	E601	<0.5	<b>3</b>	<0.5	<0.5	<b>0.98</b>	<1	<b>1.8</b>	<b>16</b>	<0.5	<b>5.3</b>	<0.5
MTU02-E	23-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU02-E	12-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

**Table A-1. VOC analyses of influent and effluent samples by treatment facility.**

Sample Station	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFG-N (cont.)</b>													
MTU02-E	02-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TF406</b>													
PTU5-I	21-JUL-09	E601	<0.5	<b>0.7</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>5.7</b>	<0.5
PTU5-I	12-AUG-09	E601	<0.5	<b>0.67</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>5.4</b>	<0.5
PTU5-I	08-SEP-09	E601	<0.5	<b>1.2</b>	<0.5	<0.5	<0.5	<1	<b>0.71</b>	<0.5	<0.5	<b>8.8</b>	<0.5
PTU5-E	21-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU5-E	12-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU5-E	08-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TF406-NW</b>													
W-1801	21-JUL-09	E601	<0.5	<b>2.1</b>	<0.5	<0.5	<0.5	<1	<b>8.6</b>	<b>0.87</b>	<0.5	<b>28</b>	<0.5
W-1801	20-AUG-09	E601	<0.5	<b>2</b>	<0.5	<0.5	<0.5	<1	<b>7</b>	<b>0.8</b>	<0.5	<b>27</b>	<0.5
GTU03-I	20-AUG-09	E601	<0.5	<b>2</b>	<0.5	<0.5	<0.5	<1	<b>7</b>	<b>0.81</b>	<0.5	<b>27</b>	<0.5
GTU03-I	03-SEP-09	E601	<0.5	<b>1.8</b>	<0.5	<0.5	<0.5	<1	<b>7.9</b>	<b>0.78</b>	<0.5	<b>30</b>	<0.5
GTU03-E	21-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU03-E	20-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU03-E	03-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TF518-N<sup>h</sup></b>													
<b>TF5475-1<sup>i</sup></b>													
<b>TF5475-2</b>													
GTU09-I	13-JUL-09	E601	<b>1.8</b>	<b>30</b>	<b>0.68</b>	<b>3.2</b>	<b>18</b>	<1	<b>5</b>	<b>44</b>	<0.5	<b>400</b>	<0.5
GTU09-I	13-AUG-09	E601	<b>1.5</b>	<b>18</b>	<b>0.5</b>	<b>1.9</b>	<b>14</b>	<1	<b>4.2</b>	<b>29</b>	<0.5	<b>290</b>	<0.5
GTU09-I	02-SEP-09	E601	<b>1.8</b>	<b>22</b>	<b>0.64</b>	<b>2.4</b>	<b>18</b>	<1	<b>6.5</b>	<b>36</b>	<0.5	<b>310</b>	<0.5
GTU09-E	13-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU09-E	13-AUG-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU09-E	02-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
<b>TF5475-3<sup>j</sup></b>													

Notes on following page.

**Table A-1. VOC analyses of influent and effluent samples by treatment facility.**

<sup>a</sup> TFA-W effluent is discharged to the Livermore Water Reclamation Plant in accordance with Permit #1510G (2006-2008). The discharge limit for Total Toxic Organics is 1.0 mg/L.

<sup>b</sup> W-404 was not sampled during the month of July due to malfunctioning equipment.

<sup>c</sup> TFD-HPD did not operate during July and August due to preparatory work being conducted under the REVAL process.

<sup>d</sup> TFD-HPD includes pre-startup sampling for the month of September.

<sup>e</sup> TFE-E includes pre-startup sampling and monthly sampling results.

<sup>f</sup> TFE-HS did not operate during July due to facility maintenance.

<sup>g</sup> TFG-N includes pre-startup sampling and monthly sampling results.

<sup>h</sup> TF518-N did not operate during this reporting period.

<sup>i</sup> TF5475-1 did not operate during this reporting period.

<sup>j</sup> TF5475-3 did not operate during this reporting period.

Notes:

CCl<sub>4</sub> = Carbon tetrachloride

CHCl<sub>3</sub> = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

**Table A-2. VOC analyses of samples from treatment facility extraction wells.**

Extraction Well	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFA</b>													
W-109	15-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	1.9	<0.5	<0.5	<0.5
W-262 <sup>a</sup>	29-JAN-08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	0.56	<0.5	<0.5	<0.5
W-408	15-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	0.53	<0.5	<0.5	<0.5
W-415	15-SEP-09	E601	<0.5	0.99	0.79	<0.5	1.6	<1	<0.5	13	<0.5	1	<0.5
W-457	15-SEP-09	E601	<0.5	<0.5	1.5	<0.5	1.6	<1	<0.5	9.5	<0.5	0.57	<0.5
W-518 <sup>a</sup>	24-APR-08	E601	<0.5	<0.5	7.3	<0.5	4	<1	<0.5	6.3	<0.5	0.67	<0.5
W-522 <sup>a</sup>	24-APR-08	E601	<0.5	<0.5	2.3	<0.5	1.5	<1	<0.5	3.5	<0.5	<0.5	<0.5
W-605	15-SEP-09	E601	<0.5	0.57	1.2	<0.5	1.5	<1	<0.5	20	<0.5	1	<0.5
W-614	15-SEP-09	E601	<0.5	0.72	<0.5	<0.5	<0.5	<1	<0.5	8.6	<0.5	<0.5	<0.5
W-712	15-SEP-09	E601	3	3	1.2	<0.5	3.7	<1	<0.5	1.8	<0.5	3.5	<0.5
W-714	15-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	11	<0.5	<0.5	<0.5
W-903 <sup>a</sup>	29-JAN-08	E601	<0.5	<0.5	1.8	<0.5	1.4	<1	<0.5	7.5	<0.5	0.52	<0.5
W-904	30-JUL-09	E601	<0.5	<0.5	1.1	<0.5	1.6	<1	<0.5	10	<0.5	0.63	<0.5
W-1001	30-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
W-1004	15-SEP-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	4.3	<0.5	<0.5	<0.5
W-1009	15-SEP-09	E601	1.2	5.2	0.89	<0.5	3.6	<1	0.6	14	<0.5	2	<0.5
<b>TFA-E</b>													
W-254	08-JUL-09	E601	<0.5	<0.5	0.5	<0.5	0.78	<1	<0.5	50	<0.5	1.7	<0.5
<b>TFA-W</b>													
W-404	14-SEP-09	E601	<0.5	<0.5	1.4	<0.5	2.6	<1	<0.5	9.1	<0.5	<0.5	<0.5
<b>TFB</b>													
W-357	06-JUL-09	E601	1.7	2.7	<0.5	<0.5	1.9	<1	6.2	1.3	<0.5	39	<0.5
W-610	06-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	1.6	<1	2.8	1	<0.5	3.1	<0.5
W-620	06-JUL-09	E601	<0.5	1.5	<0.5	<0.5	1.6	<1	2.9	1.6	<0.5	7.4	<0.5
W-621	06-JUL-09	E601	<0.5	0.81	<0.5	<0.5	0.77	<1	1.7	0.61	<0.5	4.9	<0.5
W-655	06-JUL-09	E601	<0.5	0.78	<0.5	<0.5	<0.5	<1	3.7	<0.5	<0.5	2.9	<0.5
W-704	06-JUL-09	E601	0.75	3.6	<0.5	<0.5	2.2	<1	6	3.5	<0.5	29	<0.5
W-1423	06-JUL-09	E601	0.96	5.2	<0.5	<0.5	3.3	<1	4.1	1.9	<0.5	11	<0.5
<b>TFC</b>													
W-701	06-JUL-09	E601	<0.5	2.8	<0.5	<0.5	2.1	<1	37	0.55	<0.5	12	0.5
W-1015	06-JUL-09	E601	<0.5	0.61	<0.5	<0.5	0.97	<1	2.6	1.2	<0.5	6	<0.5
W-1102	06-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	8	<0.5	<0.5	2.4	<0.5
W-1103	06-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	2	<0.5
W-1104	06-JUL-09	E601	<0.5	0.83	<0.5	<0.5	<0.5	<1	4.9	9.3	<0.5	22	<0.5
W-1116	06-JUL-09	E601	<0.5	2.3	<0.5	<0.5	0.59	<1	9	2.7	<0.5	4.3	<0.5

**Table A-2. VOC analyses of samples from treatment facility extraction wells.**

Extraction Well	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFC-E</b>													
W-368	13-JUL-09	E601	<0.5	13	<0.5	<0.5	0.76	<1	15	1.8	<0.5	16	5.6
W-413	13-JUL-09	E601	<0.5	20	<0.5	<0.5	1.2	<1	12	<0.5	<0.5	10	4.8
<b>TFC-SE</b>													
W-1213	07-JUL-09	E601	<0.5	7.2	<0.5	<0.5	4.4	<1	9.3	<0.5	<0.5	20	<0.5
W-2201	07-JUL-09	E601	<0.5	10	<0.5	<0.5	2.4	<1	19	0.71	<0.5	20	1.6
<b>TFD</b>													
W-351	08-SEP-09	E601	6.7	1.3	<0.5	0.86	4.5	<1	1.5	5.3	<0.5	150	1.9
W-653	08-SEP-09	E601	42	12	<0.5	<0.5	1.6	13	6.1	1.1	<0.5	1100	<0.5
W-906	15-SEP-09	E601	<0.5	0.52	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	3.5	<0.5
W-907-2 <sup>a</sup>	08-APR-09	E601	<0.5	7.2	<0.5	0.6	4.2	<1	1.6	7.8	<0.5	92	<0.5
W-1206	08-SEP-09	E601	0.66	1	<0.5	<0.5	0.58	<1	<0.5	0.79	<0.5	22	<0.5
W-1208	08-SEP-09	E601	3.2	2.2	<0.5	<0.5	<0.5	<1	0.67	0.71	<0.5	66	58
W-2011	27-AUG-09	E601	<0.5	0.56	<0.5	<0.5	<0.5	12	<0.5	<0.5	<0.5	4.8	<0.5
W-2101	08-SEP-09	E601	5.4	2.4	<0.5	<0.5	<0.5	<1	0.79	<0.5	<0.5	150	<0.5
W-2102	28-AUG-09	E601	9.1	7.5	<0.5	<0.5	0.51	2.3	2.6	0.54	<0.5	660	<0.5
<b>TFD-E</b>													
W-1253 <sup>ab</sup>	11-FEB-08	E601	6	6.2	<5	<5	16	<10	17	12	<5	2300	<5
W-1255 <sup>a</sup>	11-FEB-08	E601	4.4	2	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	260	<0.5
W-1301	08-JUL-09	E601	6.4	2.7	3.2	9	69	<1	0.77	35	<0.5	440	0.58
W-1303 <sup>a</sup>	14-OCT-08	E601	3	2.9	0.8	3.1	7.2	<1	<0.5	6.7	<0.5	150	23
W-1306	08-JUL-09	E601	6.6	2.9	<0.5	<0.5	0.91	<1	<0.5	3.5	<0.5	120	<0.5
W-1307	08-JUL-09	E601	2.1	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	28	<0.5
W-1404	08-JUL-09	E601	0.69	10	4.7	28	22	5.6	<0.5	92	<0.5	310	0.74
W-1550	08-JUL-09	E601	19	3.7	<0.5	<0.5	3.1	<1	1.8	10	<0.5	160	<0.5
W-2006 <sup>a</sup>	14-OCT-08	E601	1.3	2.4	2.9	9.5	88	1.3	<0.5	83	<0.5	690	<0.5
W-2203	08-JUL-09	E601	17	2.2	<0.5	<0.5	3.2	<1	4.2	5.2	<0.5	140	<0.5
<b>TFD-HPD</b>													
W-1254	24-SEP-09	E601	2.3	0.96	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	76	<0.5
W-1551	24-AUG-09	E601	4	2.1	<0.5	<0.5	<0.5	<1	1.6	<0.5	<0.5	170	<0.5
W-1552	24-AUG-09	E601	<0.5	1.1	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	26	<0.5
W-1650	20-AUG-09	E601	6.1	1.6	<0.5	<0.5	<0.5	<1	2.2	<0.5	<0.5	260	<0.5
W-1651	24-AUG-09	E601	1.5	1	<0.5	<0.5	<0.5	<1	0.85	<0.5	<0.5	74	<0.5
W-1652	20-AUG-09	E601	1.2	1.1	<0.5	<0.5	<0.5	2.4	<0.5	0.63	<0.5	150	<0.5
W-1653	20-AUG-09	E601	0.58	0.67	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	49	<0.5
W-1654	24-AUG-09	E601	<0.5	0.68	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	25	<0.5

**Table A-2. VOC analyses of samples from treatment facility extraction wells.**

Extraction Well	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFD-HPD (cont.)</b>													
W-1655	24-AUG-09	E601	<b>0.62</b>	<b>1.1</b>	<0.5	<0.5	<0.5	<1	<0.5	<b>0.91</b>	<0.5	<b>63</b>	<0.5
W-1656	20-AUG-09	E601	<b>2.1</b>	<b>3</b>	<0.5	<0.5	<0.5	<1	<b>0.55</b>	<0.5	<0.5	<b>97</b>	<0.5
W-1657	24-AUG-09	E601	<b>8.9</b>	<b>4</b>	<0.5	<0.5	<0.5	<1	<b>4</b>	<0.5	<0.5	<b>730</b>	<0.5
<b>TFD-S</b>													
W-1503	22-JUL-09	E601	<b>4.3</b>	<b>3.3</b>	<0.5	<b>0.67</b>	<b>11</b>	<1	<b>2.4</b>	<b>7.4</b>	<0.5	<b>200</b>	<b>0.71</b>
W-1504	17-AUG-09	E601	<0.5	<b>0.71</b>	<0.5	<0.5	<b>9.7</b>	<1	<b>2.2</b>	<b>15</b>	<0.5	<b>75</b>	<0.5
W-1510	22-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<b>1.6</b>	<1	<0.5	<b>2.7</b>	<0.5	<b>21</b>	<0.5
<b>TFD-SE</b>													
W-314 <sup>a</sup>	07-JAN-08	E601	<b>1.6</b>	<b>8.9</b>	<b>0.72</b>	<b>1.7</b>	<b>11</b>	<1	<b>5</b>	<b>21</b>	<0.5	<b>170</b>	<0.5
W-1308	07-JUL-09	E601	<0.5	<b>1.8</b>	<b>2.8</b>	<b>8.1</b>	<b>26</b>	<b>1.8</b>	<0.5	<b>91</b>	<0.5	<b>230</b>	<0.5
W-1403	04-AUG-09	E601	<b>4.2</b>	<b>31</b>	<b>1.8</b>	<b>8.8</b>	<b>57</b>	<1	<b>7.3</b>	<b>100</b>	<0.5	<b>500</b>	<0.5
W-1904 <sup>a</sup>	26-DEC-07	E601	<0.5	<0.5	<b>0.54</b>	<b>0.67</b>	<b>5.8</b>	<1	<0.5	<b>39</b>	<0.5	<b>42</b>	<0.5
W-2005	07-JUL-09	E601	<b>1.5</b>	<b>1.4</b>	<b>1.8</b>	<b>3.9</b>	<b>50</b>	<1	<0.5	<b>90</b>	<0.5	<b>220</b>	<0.5
SIP-ETC-201 <sup>a</sup>	26-DEC-07	E601	<0.5	<b>0.55</b>	<b>0.59</b>	<b>1.1</b>	<b>8.5</b>	<1	<0.5	<b>59</b>	<0.5	<b>60</b>	<0.5
<b>TFD-SS</b>													
W-1523	22-JUL-09	E601	<b>6</b>	<b>1.9</b>	<0.5	<b>1.1</b>	<b>11</b>	<1	<b>1.1</b>	<b>11</b>	<0.5	<b>150</b>	<0.5
W-1601	22-JUL-09	E601	<b>3.9</b>	<b>4.5</b>	<b>1.7</b>	<b>6.1</b>	<b>29</b>	<b>1.3</b>	<b>1.8</b>	<b>94</b>	<0.5	<b>270</b>	<0.5
W-1602	22-JUL-09	E601	<0.5	<b>1.9</b>	<0.5	<0.5	<0.5	<1	<0.5	<b>0.84</b>	<0.5	<b>13</b>	<b>16</b>
W-1603 <sup>a</sup>	11-APR-08	E601	<b>1.6</b>	<b>2</b>	<b>1.2</b>	<b>4.8</b>	<b>16</b>	<b>1.2</b>	<0.5	<b>33</b>	<0.5	<b>170</b>	<b>8.6</b>
<b>TFD-W</b>													
W-1215 <sup>a</sup>	15-JUL-08	E601	<0.5	<b>6.5</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>5.6</b>	<b>34</b>
W-1216	22-JUL-09	E601	<0.5	<b>3.4</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>5.6</b>	<b>61</b>
W-1902	22-JUL-09	E601	<b>0.69</b>	<b>3.3</b>	<0.5	<0.5	<0.5	<1	<b>0.64</b>	<0.5	<0.5	<b>8.3</b>	<b>98</b>
<b>TFE-E</b>													
W-566	15-SEP-09	E601	<b>0.53</b>	<b>2.1</b>	<0.5	<0.5	<b>3.8</b>	<1	<b>11</b>	<b>4.2</b>	<0.5	<b>42</b>	<0.5
W-1109	02-SEP-09	E601	<0.5	<0.5	<b>0.55</b>	<0.5	<b>46</b>	<1	<b>8.8</b>	<b>83</b>	<0.5	<b>200</b>	<0.5
W-1903	06-JUL-09	E601	<0.5	<0.5	<b>1.3</b>	<0.5	<b>39</b>	<1	<b>7.6</b>	<b>88</b>	<0.5	<b>91</b>	<0.5
W-1909	27-AUG-09	E601	<0.5	<b>1.4</b>	<b>3.4</b>	<0.5	<b>180</b>	<b>3.1</b>	<b>17</b>	<b>350</b>	<0.5	<b>540</b>	<0.5
W-2305 <sup>a</sup>	24-JUN-09	E601	<0.5	<b>1.7</b>	<b>2.3</b>	<b>0.56</b>	<b>300</b>	<b>3.8</b>	<b>38</b>	<b>700</b>	<0.5	<b>1700</b>	<b>0.51</b>
<b>TFE-HS</b>													
W-2012	10-AUG-09	E601	<b>1.3</b>	<b>2.1</b>	<0.5	<0.5	<b>7.2</b>	<b>1.9</b>	<b>7.3</b>	<b>13</b>	<0.5	<b>200</b>	<0.5
W-2105 <sup>a</sup>	16-JUN-09	E601	<0.5	<b>0.74</b>	<0.5	<0.5	<b>0.79</b>	<1	<b>1.6</b>	<b>8.6</b>	<0.5	<b>210</b>	<0.5

**Table A-2. VOC analyses of samples from treatment facility extraction wells.**

Extraction Well	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFE-NW</b>													
W-1211	20-JUL-09	E601	<b>0.59</b>	<b>3.3</b>	<0.5	<0.5	<0.5	<0.5	1	<0.5	<0.5	<b>12</b>	<0.5
W-1409 <sup>a</sup>	10-APR-08	E601	<0.5	<0.5	<0.5	<0.5	1.2	<1	0.57	1.7	<0.5	<b>30</b>	<0.5
<b>TFE-SE</b>													
W-359	17-AUG-09	E601	<b>2.3</b>	<0.5	<0.5	<0.5	9.5	<1	8.6	5.2	<0.5	<b>73</b>	<b>0.55</b>
<b>TFE-SW</b>													
W-1518	01-SEP-09	E601	<0.5	<b>0.64</b>	<0.5	<0.5	1.3	1.4	<0.5	<0.5	<0.5	<b>10</b>	<0.5
W-1520	01-JUL-09	E601	<b>6.5</b>	<b>4.5</b>	<0.5	1.2	1.2	2.9	<0.5	3.8	<0.5	<b>60</b>	<0.5
W-1522	01-JUL-09	E601	<b>6.1</b>	<b>4.4</b>	<0.5	1.6	3.8	3.7	<0.5	5.8	<0.5	<b>100</b>	<0.5
<b>TFE-W</b>													
W-292	06-JUL-09	E601	<0.5	<b>0.69</b>	<0.5	<0.5	0.68	3.4	1.5	0.9	<0.5	<b>19</b>	<0.5
W-305	06-JUL-09	E601	<0.5	<b>1.3</b>	<0.5	<0.5	3.5	1.8	26	9.4	<0.5	<b>48</b>	<b>0.97</b>
<b>TFG-1</b>													
W-1111	23-JUL-09	E601	<b>3</b>	<b>9.3</b>	<0.5	<0.5	1.1	<1	0.55	1.2	<0.5	<b>3.8</b>	<0.5
<b>TFG-N</b>													
W-1806	17-SEP-09	E601	<0.5	<b>8.3</b>	<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5	<b>1.8</b>	<0.5
W-1807	02-SEP-09	E601	<0.5	<b>3</b>	<0.5	<0.5	0.99	<1	1.9	17	<0.5	<b>5.4</b>	<0.5
<b>TF406</b>													
W-1309	21-JUL-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>1.6</b>	<0.5
W-1310	21-JUL-09	E601	<0.5	<b>0.97</b>	<0.5	<0.5	<0.5	<1	0.64	<0.5	<0.5	<b>8</b>	<0.5
GSW-445 <sup>a</sup>	26-MAR-09	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>3</b>	<0.5
<b>TF406-NW</b>													
W-1801	20-AUG-09	E601	<0.5	<b>2</b>	<0.5	<0.5	<0.5	<1	7	0.8	<0.5	<b>27</b>	<0.5
<b>TF518-N<sup>c</sup></b>													
W-1410 <sup>a</sup>	23-JAN-08	E601	<b>2.8</b>	<b>1.5</b>	<0.5	<0.5	<0.5	<1	<0.5	0.83	<0.5	<b>18</b>	<0.5
<b>TF518-PZ</b>													
W-1615 <sup>a</sup>	07-FEB-08	E601	<b>0.58</b>	<b>0.84</b>	<0.5	<0.5	3	<1	<0.5	42	<0.5	<b>130</b>	<0.5
W-518-1913 <sup>a</sup>	07-FEB-08	E601	<0.5	<0.5	<0.5	<0.5	7.5	<1	<0.5	18	<0.5	<b>34</b>	<0.5
W-518-1914 <sup>a</sup>	07-FEB-08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	20	<0.5	<b>5.6</b>	<0.5
W-518-1915 <sup>b</sup>	17-AUG-09	E601	<2.5	<2.5	<2.5	<2.5	23	<5	<2.5	340	<2.5	<b>1900</b>	<2.5
SVB-518-201 <sup>a</sup>	07-FEB-08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	35	<0.5	<b>8.5</b>	<0.5

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub>	1,1-DCA	1,2-DCA	1,1-DCE ug/L (ppb)	1,2-DCE	Freon 113	PCE	1,1,1-TCA	TCE	Freon 11 >
<b>TF518-PZ (cont.)</b>													
SVB-518-204 <sup>a</sup>	07-FEB-08	E601	<0.5	<b>0.63</b>	<0.5	<0.5	1.4	<1	<0.5	43	<0.5	<b>550</b>	<0.5
<b>TF5475-1<sup>c</sup></b>													
W-1302-2 <sup>a</sup>	18-JUL-07	E601	<b>1.8</b>	<b>19</b>	<b>0.73</b>	<b>3.4</b>	<b>20</b>	<1	<b>7.4</b>	<b>41</b>	<0.5	<b>260</b>	<0.5
<b>TF5475-2</b>													
W-1108	13-JUL-09	E601	<b>1.9</b>	<b>31</b>	<b>0.79</b>	<b>3.2</b>	<b>20</b>	<1	<b>5.6</b>	<b>51</b>	<0.5	<b>410</b>	<0.5
W-1415 <sup>a</sup>	12-MAY-09	E601	<b>0.63</b>	<b>5.4</b>	<0.5	<0.5	<b>9</b>	<1	<b>2.3</b>	<b>8</b>	<0.5	<b>65</b>	<0.5
<b>TF5475-3<sup>c</sup></b>													
W-1604 <sup>a</sup>	21-AUG-07	E601	<b>2.9</b>	<b>29</b>	<b>0.94</b>	<b>5.2</b>	<b>23</b>	<1	<b>17</b>	<b>45</b>	<0.5	<b>390</b>	<0.5
W-1605 <sup>a</sup>	21-AUG-07	E601	<b>1.3</b>	<b>13</b>	<0.5	<b>5.7</b>	<b>7.2</b>	<b>1.2</b>	<b>4</b>	<b>21</b>	<0.5	<b>210</b>	<0.5
W-1608 <sup>a</sup>	21-AUG-07	E601	<0.5	<b>9.5</b>	<b>0.71</b>	<b>3.2</b>	<b>2.1</b>	<b>3.2</b>	<b>1.8</b>	<b>7.1</b>	<0.5	<b>69</b>	<0.5
W-1609 <sup>a</sup>	21-AUG-07	E601	<0.5	<b>13</b>	<b>0.55</b>	<b>9.4</b>	<b>2.7</b>	<1	<b>0.94</b>	<b>7.9</b>	<0.5	<b>62</b>	<0.5

Notes on following page.

**Table A-2. VOC analyses of samples from treatment facility extraction wells.**

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<sup>a</sup> Most recent VOC sample results available.

<sup>b</sup> Elevated detection limit due to dilution.

<sup>c</sup> Treatment Facility did not operate during reporting period. Please refer to Table A-1 for details.

Notes:

CCl<sub>4</sub> = Carbon tetrachloride

CHCl<sub>3</sub> = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

**Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.**

Extraction Well	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE PPM(V/V)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>VTFD-ETCS</b>													
W-1904 <sup>a</sup>	09-JUN-09	TO15DIT	<0.005	<b>0.041</b>	<b>0.0056</b>	<0.005	<b>0.25</b>	<0.005	<0.005	<b>2.1</b>	<0.005	<b>0.67</b>	<0.005
W-ETC-2003	17-SEP-09	TO15DIT	<b>0.0057</b>	<0.005	<0.005	<0.005	<b>0.044</b>	<0.005	<0.005	<b>0.89</b>	<0.005	<b>0.23</b>	<0.005
W-ETC-2004A	17-SEP-09	TO15DIT	<0.0072	<b>0.0087</b>	<0.0072	<0.0072	<0.0072	<0.0072	<0.0072	<b>1.3</b>	<0.0072	<b>0.28</b>	<0.0072
W-ETC-2004B	17-SEP-09	TO15DIT	<0.017	<b>0.038</b>	<0.017	<0.017	<b>0.15</b>	<0.017	<0.017	<b>3.3</b>	<0.017	<b>2.5</b>	<0.017
SIP-ETC-201 <sup>a</sup>	09-JUN-09	TO15DIT	<0.005	<b>0.009</b>	<b>0.037</b>	<b>0.0059</b>	<b>0.65</b>	<0.005	<0.005	<b>2.9</b>	<0.005	<b>1.4</b>	<0.005
<b>VTFD-HPD<sup>b</sup></b>													
W-1552 <sup>a</sup>	13-FEB-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.011</b>	<0.005	<b>0.2</b>	<0.005
W-1650 <sup>a</sup>	03-JUL-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-1651 <sup>a</sup>	03-JUL-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-1652 <sup>a</sup>	03-JUL-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-1653 <sup>a</sup>	03-JUL-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-1654 <sup>a</sup>	03-JUL-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-1655 <sup>a</sup>	03-JUL-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-1656 <sup>a</sup>	03-JUL-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-1657 <sup>a</sup>	03-JUL-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-HPA-002A	23-JUL-09	TO15DIT	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<b>0.15</b>
W-HPA-002B	23-JUL-09	TO15DIT	<0.011	<b>0.011</b>	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<b>0.056</b>	<0.011	<b>0.46</b>
<b>VTFD-HS<sup>c</sup></b>													
W-653 <sup>a</sup>	15-FEB-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.093</b>	<0.005
W-2011 <sup>a</sup>	15-FEB-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.081</b>	<0.005
W-2101 <sup>a</sup>	15-FEB-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.061</b>	<0.005
W-2102 <sup>a</sup>	15-FEB-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.11</b>	<0.005
<b>VTFE-ELM<sup>d</sup></b>													
W-1903	08-JUL-09	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-1909	10-JUL-09	TO15DIT	<0.005	<0.005	<b>0.0058</b>	<0.005	<b>0.95</b>	<0.005	<b>0.44</b>	<b>0.75</b>	<0.005	<b>1.5</b>	<0.005
W-2305	10-JUL-09	TO15DIT	<0.01	<0.01	<0.01	<0.01	<b>6</b>	<b>0.012</b>	<b>2.3</b>	<b>3.3</b>	<0.01	<b>7.5</b>	<b>0.014</b>
W-543-001	01-JUL-09	TO15DIT	<0.005	<0.005	<0.005	<0.005	<b>0.11</b>	<0.005	<b>0.017</b>	<b>0.34</b>	<0.005	<b>0.32</b>	<0.005
W-543-003	17-SEP-09	TO15DIT	<0.005	<b>0.015</b>	<b>0.018</b>	<0.005	<b>0.29</b>	<b>0.0057</b>	<b>0.074</b>	<b>0.57</b>	<b>0.018</b>	<b>0.92</b>	<b>0.011</b>
W-543-1908	01-JUL-09	TO15DIT	<0.005	<0.005	<0.005	<0.005	<b>0.072</b>	<0.005	<b>0.019</b>	<b>0.13</b>	<0.005	<b>0.33</b>	<0.005
<b>VTFE-HS<sup>e</sup></b>													
W-ETS-2008A	17-SEP-09	TO15DIT	<0.005	<0.005	<b>0.027</b>	<0.005	<0.005	<0.005	<0.005	<b>0.092</b>	<b>0.025</b>	<b>0.16</b>	<0.005
W-ETS-2008B	17-SEP-09	TO15DIT	<0.021	<0.021	<0.021	<0.021	<b>0.043</b>	<b>0.021</b>	<b>0.14</b>	<b>1.1</b>	<0.021	<b>3.4</b>	<0.021
W-ETS-2009	13-AUG-09	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.022</b>	<0.005	<b>0.18</b>	<0.005
W-ETS-2010A	17-SEP-09	TO15DIT	<0.005	<0.005	<b>0.0086</b>	<0.005	<0.005	<0.005	<b>0.0078</b>	<b>0.096</b>	<b>0.0078</b>	<b>0.33</b>	<0.005
W-ETS-2010B	05-AUG-09	TO15DIT	<0.005	<0.005	<b>0.016</b>	<0.005	<b>0.011</b>	<b>0.03</b>	<b>0.046</b>	<b>0.095</b>	<b>0.051</b>	<b>1</b>	<0.005

Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl <sub>4</sub> <-	CHCl <sub>3</sub> -	1,1-DCA -	1,2-DCA -	1,1-DCE PPM(V/V)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 >
<b>VTF-E-HS (cont.)</b>													
W-2105 <sup>a</sup>	30-JAN-08	TO15DI	<0.005	<0.005	<0.005	<0.005	<b>0.014</b>	<0.005	<b>0.01</b>	<b>0.022</b>	<0.005	<b>0.13</b>	<0.005
<b>VTF406-HS</b>													
W-217	22-JUL-09	TO15DIT	<b>0.24</b>	<b>0.03</b>	<b>0.014</b>	<0.005	<b>1.8</b>	<b>0.011</b>	<b>0.33</b>	<b>2.4</b>	<0.005	<b>2.2</b>	<0.005
W-514-2007A	22-JUL-09	TO15DIT	<b>0.01</b>	<0.005	<0.005	<0.005	<b>0.029</b>	<0.005	<b>0.014</b>	<b>0.073</b>	<0.005	<b>0.26</b>	<b>0.1</b>
W-514-2007B	22-JUL-09	TO15DIT	<b>0.11</b>	<b>0.014</b>	<b>0.011</b>	<0.005	<b>1.1</b>	<b>0.0074</b>	<b>0.086</b>	<b>0.88</b>	<0.005	<b>2.3</b>	<b>0.021</b>
<b>VTF511</b>													
W-274 <sup>a</sup>	04-OCT-06	TO15DI	<b>0.14</b>	<b>0.02</b>	<0.0062	<0.0062	<b>0.07</b>	<0.0062	<b>0.014</b>	<b>0.33</b>	<0.0062	<b>6.1</b>	<b>0.38</b>
W-1517 <sup>a</sup>	20-DEC-07	TO15DI	<b>0.0066</b>	<0.005	<0.005	<0.005	<b>0.0068</b>	<0.005	<0.005	<b>0.022</b>	<0.005	<b>0.65</b>	<b>0.016</b>
W-2204 <sup>a</sup>	21-MAY-09	TO15DIT	<b>0.098</b>	<b>0.034</b>	<0.005	<b>0.038</b>	<b>0.019</b>	<0.005	<b>0.0082</b>	<b>0.42</b>	<0.005	<b>3.9</b>	<0.005
W-2206 <sup>a</sup>	21-MAY-09	TO15DIT	<b>0.013</b>	<b>0.022</b>	<0.005	<b>0.024</b>	<0.005	<0.005	<0.005	<b>0.24</b>	<0.005	<b>2</b>	<0.005
W-2207A <sup>a</sup>	14-MAY-09	TO15DIT	<0.005	<b>0.0055</b>	<0.005	<0.005	<b>0.0053</b>	<0.005	<0.005	<b>0.01</b>	<0.005	<b>1.5</b>	<0.005
W-2207B	22-JUL-09	TO15DIT	<b>0.012</b>	<b>0.021</b>	<0.0072	<0.0072	<b>0.023</b>	<0.0072	<0.0072	<b>0.029</b>	<0.0072	<b>5.2</b>	<0.0072
W-2208A <sup>a</sup>	14-MAY-09	TO15DIT	<b>0.025</b>	<b>0.016</b>	<0.01	<0.01	<b>0.05</b>	<0.01	<0.01	<b>0.019</b>	<0.01	<b>9.8</b>	<b>0.026</b>
W-2208B	22-JUL-09	TO15DIT	<b>0.7</b>	<b>0.24</b>	<b>0.22</b>	<0.084	<b>5.5</b>	<b>0.2</b>	<b>0.28</b>	<b>1.8</b>	<0.084	<b>77</b>	<b>0.22</b>
W-2205 <sup>a</sup>	21-MAY-09	TO15DIT	<b>0.18</b>	<b>0.033</b>	<0.005	<b>0.0052</b>	<b>0.045</b>	<0.005	<b>0.0078</b>	<b>0.23</b>	<0.005	<b>3.6</b>	<b>0.012</b>
<b>VTF518-PZ<sup>f</sup></b>													
W-1615	17-AUG-09	TO15DIT	<0.033	<0.033	<0.033	<0.033	<b>0.035</b>	<0.033	<0.033	<b>0.7</b>	<0.033	<b>3.8</b>	<0.033
W-518-1913	17-AUG-09	TO15DIT	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<b>0.19</b>	<0.17
W-518-1914	17-AUG-09	TO15DIT	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<b>1.1</b>	<0.12	<b>0.61</b>	<0.12
W-518-1915	17-AUG-09	TO15DIT	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<b>1.2</b>	<0.42
SVB-518-201	14-AUG-09	TO15DIT	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<b>0.26</b>	<0.076
SVB-518-204 <sup>a</sup>	15-JAN-08	TO15DI	<0.02	<0.02	<0.02	<0.02	<b>0.051</b>	<0.02	<0.02	<b>2.4</b>	<0.02	<b>15</b>	<0.02
<b>VTF5475<sup>g</sup></b>													
W-ETS-507 <sup>a</sup>	06-SEP-07	TO15DI	<0.005	<b>0.85</b>	<0.005	<b>0.62</b>	<0.005	<0.005	<0.005	<b>0.15</b>	<0.005	<b>0.67</b>	<0.005
W-1605 <sup>a</sup>	06-SEP-07	TO15DI	<b>0.0069</b>	<b>0.17</b>	<0.005	<b>0.15</b>	<b>0.11</b>	<0.005	<b>0.036</b>	<b>0.1</b>	<0.005	<b>0.85</b>	<0.005
W-1608 <sup>a</sup>	06-SEP-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.0061</b>	<0.005
W-2211 <sup>a</sup>	12-OCT-07	TO15DI	<0.005	<b>0.49</b>	<b>0.012</b>	<b>0.15</b>	<b>0.14</b>	<0.005	<b>0.01</b>	<b>0.11</b>	<0.005	<b>1.2</b>	<0.005
W-2212 <sup>a</sup>	12-OCT-07	TO15DI	<b>0.056</b>	<b>0.75</b>	<b>0.024</b>	<b>0.039</b>	<b>1.1</b>	<0.005	<b>0.16</b>	<b>0.66</b>	<0.005	<b>3.8</b>	<0.005
W-2302 <sup>a</sup>	05-OCT-07	TO15DI	<b>0.032</b>	<b>0.47</b>	<b>0.022</b>	<0.017	<b>0.73</b>	<0.017	<b>0.063</b>	<b>0.86</b>	<0.017	<b>11</b>	<0.017
W-2303 <sup>a</sup>	05-OCT-07	TO15DI	<b>0.009</b>	<b>0.88</b>	<b>0.038</b>	<b>0.083</b>	<b>0.4</b>	<0.005	<b>0.0088</b>	<b>0.36</b>	<0.005	<b>3.7</b>	<0.005
SVI-ETS-504 <sup>a</sup>	12-OCT-07	TO15DI	<0.005	<b>0.32</b>	<b>0.0052</b>	<b>0.14</b>	<b>0.073</b>	<0.005	<0.005	<b>0.064</b>	<0.005	<b>0.34</b>	<0.005

Notes on following page.

**Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.**

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<sup>a</sup> Most recent VOC vapor sample results available.

<sup>b</sup> VTFD-HPD did not operate during the months of July and August.

<sup>c</sup> VTFD-HS did not operate during the months of July and August.

<sup>d</sup> VTFE-ELM did not operate during the month of July.

<sup>e</sup> VTFE-HS did not operate during the month of July.

<sup>f</sup> VTF518-PZ did not operate during the months of July and August.

<sup>g</sup> VTF5475 did not operate during reporting period.

Notes:

CCl<sub>4</sub> = Carbon tetrachloride

CHCl<sub>3</sub> = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

**Table A-4. Chromium analyses of influent, effluent and receiving water samples by treatment facility.**

Treatment Facility	Sample Station	Date Sampled	Chromium (total) <sup>a</sup> mg/L (ppm)	Hexavalent Chromium mg/L (ppm)
TFA	TFA-I001	06-JUL-09	0.011	0.011
	TFA-E001	06-JUL-09	0.011	0.012
TFA-E	W-254	08-JUL-09	0.0085	NA
	STU06-E	08-JUL-09	0.0092	NA
TFB	TFB-I002	06-JUL-09	0.019	NA
	TFB-E002	06-JUL-09	0.019	NA
	TFB-E002	03-AUG-09	0.019	NA
	TFB-E002	01-SEP-09	0.02	NA
	TFB-R002	06-JUL-09	0.016	NA
TFC	TFC-I003	06-JUL-09	0.022	NA
	TFC-E003	06-JUL-09	0.022	NA
	TFC-E003	03-AUG-09	0.022	NA
	TFC-E003	22-SEP-09	0.019	NA
	TFC-R003	06-JUL-09	0.0085	NA
TFC-E	MTU1-I	13-JUL-09	0.045	NA
	MTU1-E	13-JUL-09	0.0037	NA
	MTU1-E	13-AUG-09	0.0045	NA
	MTU1-E	29-SEP-09	0.0034	NA
TFC-SE	PTU1-I	07-JUL-09	0.032	NA
	PTU1-E	07-JUL-09	0.032	NA
	PTU1-E	05-AUG-09	0.031	NA
	PTU1-E	01-SEP-09	0.031	NA
TFD	TFD-I004	08-SEP-09	0.0097	NA
	TFD-E004	08-SEP-09	0.01	NA
TFD-E	PTU8-I	08-JUL-09	0.0072	NA
	PTU8-E	08-JUL-09	0.0075	NA
TFD-HPD	PTU10-I	24-SEP-09	0.014	NA
	PTU10-E	24-SEP-09	0.012	0.012
TFD-S	PTU2-I	22-JUL-09	0.012	NA
	PTU2-E	22-JUL-09	0.012	NA
TFD-SE	PTU11-I	07-JUL-09	0.013	NA
	PTU11-E	07-JUL-09	0.014	NA
TFD-SS	PTU12-I	22-JUL-09	0.011	NA
	PTU12-E	22-JUL-09	0.012	NA
TFD-W	PTU6-I	22-JUL-09	0.012	NA
	PTU6-E	22-JUL-09	0.012	NA
TFE-E	PTU3-I	28-JUL-09	0.01	NA
	PTU3-E	28-JUL-09	0.011	0.01
TFE-HS	GTU07-I	10-AUG-09	0.0076	NA
	GTU07-E	10-AUG-09	<0.001	NA
TFE-NW	PTU9-I	20-JUL-09	0.01	NA
	PTU9-E	20-JUL-09	0.011	NA

**Table A-4. Chromium analyses of influent, effluent and receiving water samples by treatment facility.**

Treatment Facility	Sample Station	Date Sampled	Chromium (total) <sup>a</sup> mg/L (ppm)	Hexavalent Chromium mg/L (ppm)
<b>TFE-SE</b>	MTU04-I	20-JUL-09	0.0061	NA
	MTU04-E	20-JUL-09	0.0061	NA
<b>TFE-SW</b>	MTU03-I	01-JUL-09	0.0054	NA
	MTU03-E	01-JUL-09	0.0048	NA
<b>TFE-W</b>	MTU05-I	06-JUL-09	0.01	NA
	MTU05-E	06-JUL-09	0.01	NA
<b>TFG-1</b>	GTU01-I	23-JUL-09	0.0073	NA
	GTU01-E	23-JUL-09	0.0071	NA
	TFG-ASW	23-JUL-09	0.012	NA
<b>TFG-N</b>	MTU02-I	23-JUL-09	0.0051	NA
	MTU02-E	23-JUL-09	<0.005	<0.005
<b>TF406</b>	PTU5-I	21-JUL-09	0.013	NA
	PTU5-E	21-JUL-09	0.013	NA
<b>TF406-NW</b>	GTU03-I	21-JUL-09	0.0029	NA
	GTU03-E	21-JUL-09	<0.001	NA
<b>TF5475-2</b>	GTU09-I	13-JUL-09	0.013	NA
	GTU09-E	13-JUL-09	0.0056	NA

<sup>a</sup>A discharge limit of 0.050 ppm is set for total chromium during the dry season (April 1-November 30), and no limit is set for total chromium for the wet season (December 1-March 31); however, a limit of 0.022 ppm hexavalent chromium applies during the wet season. Discharge limits are defined in the Explanation of Significant Differences for metals discharge limits (April 1997).

Shaded values exceeded the discharge limit. See text for explanation.

**Table A-5. Bioassay, turbidity, and chloride analyses of influent and effluent samples by treatment facility.**

Treatment Facility	Sample Station	Date Sampled	Aquatic Bioassay <sup>a</sup> Percent Survival	Turbidity Nephelometric Turbidity Units (NTU)	Chloride (mg/L)
TFA	TFA-I001	06-JUL-09	NA	NA	91
TFA	TFA-E001	06-JUL-09	100 (100)	<0.1	90
<b>TFA-E</b>	STU06-E	08-JUL-09	100 (100)	NA	NA
<b>TFB</b>	TFB-E002	06-JUL-09	100 (100)	NA	NA
<b>TFC</b>	TFC-E003	06-JUL-09	100 (100)	NA	NA
<b>TFC-E</b>	MTU1-E	13-JUL-09	100 (100)	NA	NA
<b>TFC-SE</b>	PTU1-E	07-JUL-09	100 (100)	NA	NA
<b>TFD</b>	TFD-E004	08-SEP-09	100 (100)	NA	NA
<b>TFD-E</b>	PTU8-E	08-JUL-09	100 (100)	NA	NA
<b>TFD-HPD</b>	PTU10-E	24-SEP-09	100 (100)	0.15	430
<b>TFD-S</b>	PTU2-E	22-JUL-09	100 (100)	NA	NA
<b>TFD-SE</b>	PTU11-E	07-JUL-09	100 (100)	NA	NA
<b>TFD-SS</b>	PTU12-E	22-JUL-09	100 (100)	NA	NA
<b>TFD-W</b>	PTU6-E	22-JUL-09	100 (100)	NA	NA
<b>TFE-E</b>	PTU3-E	28-JUL-09	100 (100)	0.36	110
<b>TFE-HS</b>	GTU07-E	10-AUG-09	100 (100)	NA	NA
<b>TFE-NW</b>	PTU9-E	20-JUL-09	100 (100)	NA	NA
<b>TFE-SE</b>	MTU04-E	20-JUL-09	100 (100)	NA	NA
<b>TFE-SW</b>	MTU03-E	01-JUL-09	100 (100)	NA	NA
<b>TFE-W</b>	MTU05-E	06-JUL-09	100 (100)	NA	NA
<b>TFG-1</b>	GTU01-E	23-JUL-09	100 (100)	NA	NA
<b>TFG-N</b>	MTU02-E	23-JUL-09	100 (100)	0.11	3.9
<b>TF406</b>	PTU5-E	21-JUL-09	100 (100)	NA	NA
<b>TF406-NW</b>	GTU03-E	21-JUL-09	100 (100)	NA	NA
<b>TF5475-2</b>	GTU09-E	13-JUL-09	100 (100)	NA	NA

<sup>a</sup>Test species was Fathead minnow and the test duration was 96 hours.

Percent survival in the control group samples shown in parentheses.

Note: NA = not applicable

## Explanation of Abbreviations

TFA-I001 is a sampling port located immediately prior to the TFA Treatment System.

TFA-E001 is a sampling port located immediately after the TFA Treatment System, at the beginning of the discharge pipeline.

TFA receiving water is routinely sampled at the TFG-ASW location.

TFA-W-I is an influent sampling port prior to the sediment bag filter immediately following W-404.

TFA-W-E is an effluent sampling port immediately following the sediment bag filter; the water is then discharged to the Livermore Water Reclamation Plant (LWRP).

TFB-I002 is a sampling port located immediately prior to the TFB Treatment System.

TFB-E002 is a sampling port located immediately after the TFB Treatment System, at the beginning of the discharge pipeline.

TFB-R002 is a sampling station in the drainage ditch north of TFB, located approximately 75 ft downstream from the discharge point.

TFC-I003 is a sampling port located immediately prior to the TFC Treatment System.

TFC-E003 is a sampling port located immediately after the TFC Treatment System, at the beginning of the discharge pipeline.

TFC-R003 is a sampling station in Arroyo Las Positas, located approximately 75 ft downstream from the TFC discharge point.

TFD-I004 is a sampling port located immediately prior to the TFD Treatment System.

TFD-E004 is a sampling port located immediately after the TFD Treatment System, prior to discharge to the Drainage Retention Basin or to the underground discharge pipeline leading to Arroyo Las Positas.

TFD-R004 is now combined with and collected at the TFC-R003 location. Results are reported under TFC-R003, as approved by the RWQCB.

CRD1-I is a sampling port located immediately prior to the catalytic column in the Catalytic Reductive Dehalogenation treatment unit 1 (CRD1).

CRD1-E is the effluent from the catalytic column in the Catalytic Reductive Dehalogenation treatment unit 1 (CRD1) and then reinjected at W-1302.

CRD2-I is a sampling port located immediately prior to the catalytic columns in the Catalytic Reductive Dehalogenation treatment unit 2 (CRD2).

CRD2-E is the effluent from the last catalytic column in the Catalytic Reductive Dehalogenation treatment unit 2 (CRD2) and then reinjected at W-1610.

GTU01-I is a sampling port located immediately prior to GTU01, which is currently operating in the TFG-1 area.

GTU01-E is a sampling port located immediately after GTU01, which is currently operating in the TFG-1 area.

GTU01 receiving water is routinely sampled at the TFG-ASW location.

GTU03-I is a sampling port located immediately prior to GTU03, which is currently operating in the TF406 Northwest area.

GTU03-E is a sampling port located immediately after GTU03, which is currently operating in the TF406 Northwest area.

GTU03 receiving water is routinely sampled at the TFC-R003 location.

GTU07-I is a sampling port located immediately prior to GTU07, which is currently operating in the TFE Hotspot area.

GTU07-E is a sampling port located immediately after GTU07, which is currently operating in the TFE Hotspot area.

GTU07 receiving water is routinely sampled at the TFC-R003 location.

GTU09-I is a sampling port located immediately prior to GTU09, which is currently operating in the TF5475 area.

GTU09-E is a sampling port located immediately after GTU09, which is currently operating in the TF5475 area.

GTU09 receiving water is routinely sampled at the TFC-R003 location.

MTU02-I is a sampling port located immediately prior to MTU02, which is currently operating in the TFG North area.

MTU02-E is a sampling port located immediately after MTU02, which is currently operating in the TFG North area.

MTU02 receiving water is routinely sampled at the TFC-R003 location.

MTU03-I is a sampling port located immediately prior to MTU03, which is currently operating in the TFE Southwest area.

MTU03-E is a sampling port located immediately after MTU03, which is currently operating in the TFE Southwest area.

MTU03 receiving water is routinely sampled at the TFC-R003 location.

MTU04-I is a sampling port located immediately prior to MTU04, which is currently operating in the TFE Southeast area.

MTU04-E is a sampling port located immediately after MTU04, which is currently operating in the TFE Southeast area.

MTU04 receiving water is routinely sampled at the TFC-R003 location.

MTU05-I is a sampling port located immediately prior to MTU05, which is currently operating in the TFE West area.

MTU05-E is a sampling port located immediately after MTU05, which is currently operating in the TFE West area.

MTU05 receiving water is routinely sampled at the TFC-R003 location.

#### Explanation of Abbreviations

MTU1-I is a sampling port located immediately prior to MTU1, which is currently operating in the TFC East area.

MTU1-E is a sampling port located immediately after MTU1, which is currently operating in the TFC East area.

MTU1 receiving water is routinely sampled at the TFC-R003 location.

PTU1-I is a sampling port located immediately prior to PTU-1, which is currently operating in the TFC Southeast area.

PTU1-E is a sampling port located immediately after PTU-1, which is currently operating in the TFC Southeast area.

PTU1 receiving water is routinely sampled at the TFC-R003 location.

PTU2-I is a sampling port located immediately prior to PTU-2, which is currently operating in the TFD South area.

PTU2-E is a sampling port located immediately after PTU-2, which is currently operating in the TFD South area.

PTU2 receiving water is routinely sampled at TFC-R003 during the wet season.

PTU3-I is a sampling port located immediately prior to PTU-3, which is currently operating in the TFE East area.

PTU3-E is a sampling port located immediately after PTU-3, which is currently operating in the TFE East area.

PTU3 receiving water is routinely sampled at the TFC-R003 location.

PTU5-I is a sampling port located immediately prior to PTU-5, which is currently operating in the TF406 extraction location.

PTU5-E is a sampling port located immediately after PTU-5, which is currently operating in the TF406 extraction location.

PTU5 receiving water is routinely sampled at the TFC-R003 location.

PTU6-I is a sampling port located immediately prior to PTU-6, which is currently operating in the TFD West area.

PTU6-E is a sampling port located immediately after PTU-6, which is currently operating in the TFD West area.

PTU6 receiving water is routinely sampled at the TFC-R003 location.

PTU8-I is a sampling port located immediately prior to PTU-8, which is currently operating in the TFD East area.

PTU8-E is a sampling port located immediately after PTU-8, which is currently operating in the TFD East area.

PTU8 receiving water is routinely sampled at the TFC-R003 location.

PTU9-I is a sampling port located immediately prior to PTU-9, which is currently operating in the TFE Northwest area.

PTU9-E is a sampling port located immediately after PTU-9, which is currently operating in the TFE Northwest area.

PTU9 receiving water is routinely sampled at the TFC-R003 location.

PTU10-I is a sampling port located immediately prior to PTU-10, which is currently operating in the TFD Helipad area.

PTU10-E is a sampling port located immediately after PTU-10, which is currently operating in the TFD Helipad area.

PTU10 receiving water is routinely sampled at the TFC-R003 location.

PTU11-I is a sampling port located immediately prior to PTU-11, which is currently operating in the TFD Southeast area.

PTU11-E is a sampling port located immediately after PTU-11, which is currently operating in the TFD Southeast area.

PTU11 receiving water is routinely sampled at the TFC-R003 location.

PTU12-I is a sampling port located immediately prior to PTU-12, which is currently operating in the TFD Southshore area.

PTU12-E is a sampling port located immediately after PTU-12, which is currently operating in the TFD Southshore area.

PTU12 receiving water is routinely sampled at the TFC-R003 location.

STU06-I is a sampling port located immediately prior to STU06, which is operating in the TFA East area.

STU06-E is a sampling port located immediately after STU06, which is operating in the TFA East area.

STU06 receiving water is routinely sampled at the TFG-ASW location.

STU09-I is a sampling port located immediately prior to STU09, which is currently operating in the TF518-North area.

STU09-E is a sampling port located immediately after STU09, which is currently operating in the TF518-North area.

STU09 receiving water is routinely sampled at the TFC-R003 location.

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## **Addendum to Attachment A**

### **Treatment Facility Monitor and Extraction Well Data**

Addendum. VOC analyses for nearby monitor wells and extraction wells associated with treatment facilities restarted during the 3rd quarter of 2009.

Sample Station	Date Sampled	Analytic Method <sup>a</sup>	CCI4 <-	CHCl3 -	1,1-DCA -	1,2-DCA -	1,1-DCE -	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 >
<b>TFE-E</b>													
<b>Extraction Wells<sup>b</sup></b>													
W-566	28-Jan-08	E601	0.64	6.9	<0.5	<0.5	3.1	<1	9.3	4.2	<0.5	55	<0.5
W-566	09-Apr-08	E601	0.71	6.7	<0.5	<0.5	3.5	<1	9.4	4.4	<0.5	58	<0.5
W-566	24-Jun-09	E601	0.67	5	<0.5	<0.5	5.8	1.1	9	11	<0.5	100	<0.5
W-566	28-Jul-09	E601	0.59	4.4	<0.5	<0.5	6.1	<1	9.6	9.5	<0.5	82	<0.5
W-566	18-Aug-09	E601	<0.5	1.9	<0.5	<0.5	3.8	<1	9.5	4	<0.5	40	<0.5
W-566	15-Sep-09	E601	0.53	2.1	<0.5	<0.5	3.8	<1	11	4.2	<0.5	42	<0.5
W-1109	28-Jan-08	E601	<0.5	0.52	<0.5	<0.5	39	<1	7.7	73	<0.5	200	<0.5
W-1109	09-Apr-08	E601	<0.5	0.58	0.51	<0.5	43	<1	7.9	71	<0.5	200	<0.5
W-1109	24-Jun-09	E601	<0.5	0.52	0.72	<0.5	62	<1	12	140	<0.5	350	<0.5
W-1109	28-Jul-09	E601	<0.5	0.76	<0.5	<0.5	60	<1	13	100	<0.5	230	<0.5
W-1109	02-Sep-09	E601	<0.5	<0.5	0.55	<0.5	46	<1	8.8	83	<0.5	200	<0.5
W-1903	30-Jul-2007	E601	<0.5	<0.5	<0.5	<0.5	23	<1	11	21	<0.5	36	<0.5
W-1903	6-Jul-2009	E601	<0.5	<0.5	1.3	<0.5	39	<1	7.6	88	<0.5	91	<0.5
W-2305	30-Jul-2007	E601	<0.5	1.1	1.5	<0.5	99	<1	21	170	<0.5	380	<0.5
W-2305	24-Jun-2009	E601	<0.5	1.7	2.3	0.56	300	3.8	38	700	<0.5	1700	0.51
W-1909	28-Apr-2009	E601	<0.5	1.4	3.3	<0.5	180	3.1	12	390	<0.5	590	<0.5
W-1909	27-Aug-2009	E601	<0.5	1.4	3.4	<0.5	180	3.1	17	350	<0.5	540	<0.5
<b>Monitor Wells<sup>c</sup></b>													
W-909	28-Feb-2008	E601	<0.5	0.93	<0.5	<0.5	52	<1	16	56	<0.5	98	<0.5
W-909	7-May-2008	E601	<0.5	1	<0.5	<0.5	52	<1	15	50	<0.5	85	<0.5
W-909	8-Sep-2008	E601	<0.5	<0.5	<0.5	<0.5	4.7	<1	<0.5	11	<0.5	24	<0.5
W-909	16-Oct-2008	E601	<0.5	<0.5	<0.5	<0.5	5.1	<1	<0.5	14	<0.5	27	<0.5
W-909	25-Feb-2009	E601	<0.5	<0.5	<0.5	<0.5	8.6	<1	<0.5	16	<0.5	33	<0.5
W-909	2-Apr-2009	E601	<0.5	<0.5	<0.5	<0.5	8.2	<1	<0.5	18	<0.5	36	<0.5
W-909	15-Jul-2009	E601	<0.5	1.5	<0.5	<0.5	41	<1	13	36	<0.5	70	<0.5
W-271	8-Aug-2007	E601	<0.5	<0.5	<0.5	<0.5	8.2	<1	4.2	5.2	<0.5	20	<0.5
W-271	19-Aug-2008	E601	<0.5	<0.5	<0.5	<0.5	4	<1	1.2	4.9	<0.5	18	<0.5
W-271	2-Apr-2009	E601	<0.5	<0.5	<0.5	<0.5	8.4	<1	4.3	5	<0.5	25	<0.5
W-257	7-May-2008	E601	<0.5	<0.5	<0.5	<0.5	50	<1	11	39	<0.5	71	<0.5
W-257	8-Sep-2008	E601	<0.5	<0.5	<0.5	<0.5	29	<1	3.6	41	<0.5	94	<0.5
W-257	13-Oct-2008	E601	<0.5	<0.5	<0.5	<0.5	37	<1	4.4	39	<0.5	92	<0.5
W-257	10-Feb-2009	E601	<0.5	<0.5	<0.5	<0.5	39	<1	5.6	35	<0.5	77	<0.5
W-257	2-Apr-2009	E601	<0.5	<0.5	<0.5	<0.5	35	<1	5.6	41	<0.5	81	<0.5
W-1202	9-May-2007	E601	<0.5	<0.5	<0.5	<0.5	4.5	<1	<0.5	9.4	<0.5	73	<0.5
W-1202	06-Aug-08	E601	<0.5	0.52	<0.5	<0.5	4	<1	0.71	9.8	<0.5	69	<0.5
W-1202	23-Feb-09	E601	<0.5	<0.5	<0.5	<0.5	4.3	<1	<0.5	9.6	<0.5	67	<0.5
W-1202	15-Jul-09	E601	<0.5	<0.5	<0.5	<0.5	3.5	<1	<0.5	8.6	<0.5	57	<0.5

Addendum. VOC analyses for nearby monitor wells and extraction wells associated with treatment facilities restarted during the 3rd quarter of 2009.

Sample Station	Date Sampled	Analytic Method <sup>a</sup>	CCI4 <-	CHCl3 -	1,1-DCA -	1,2-DCA -	1,1-DCE -	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 >
<b>TFE-E (cont.)</b>													
<b>Monitor Wells<sup>c</sup></b>													
W-911	07-Jan-08	E601	<0.5	<0.5	<0.5	<0.5	11	<1	3.4	11	<0.5	18	<0.5
W-911	25-Feb-09	E601	<0.5	<0.5	0.75	<0.5	43	<1	5.5	49	<0.5	83	<0.5
W-911	16-Sep-09	E601	<0.5	<0.5	<0.5	<0.5	13	<1	4.5	9.1	<0.5	16	<1
W-912	28-Feb-08	E601	1.4	19	0.52	2	12	<1	5.3	25	<0.5	230	<0.5
W-912	07-May-08	E601	0.85	11	<0.5	1.1	7.7	<1	3.5	14	<0.5	140	<0.5
W-912	28-Aug-08	E601	1.7	22	0.55	2.2	14	<1	5.8	30	<0.5	260	<0.5
W-912	21-Oct-08	E601	1.6	20	<0.5	2.1	12	<1	5.2	29	<0.5	260	<0.5
W-912	05-Feb-09	E601	1.5	21	0.58	1.9	15	<1	6	26	<0.5	260	<0.5
W-912	02-Apr-09	E601	1	15	<0.5	1.5	9.3	<1	4.8	18	<0.5	200	<0.5
W-912	15-Jul-09	E601	<0.5	6.2	<0.5	0.86	3.1	<1	1.5	5.6	<0.5	67	<0.5
W-1203	07-May-08	E601	1.8	0.65	<0.5	<0.5	0.98	<1	8.6	1.1	<0.5	140	<0.5
W-1203	02-Apr-09	E601	0.57	<0.5	<0.5	<0.5	3.6	<1	17	0.71	<0.5	30	<0.5
W-1203	16-Jul-09	E601	0.69	<0.5	<0.5	<0.5	1.7	<1	8.3	0.5	<0.5	57	<0.5
W-1210	28-Apr-08	E601	<0.5	4.2	<0.5	<0.5	9.8	<1	3.7	8.2	<0.5	52	<0.5
W-1210	21-Aug-08	E601	<0.5	<0.5	<0.5	<0.5	1.7	<1	0.61	1.5	<0.5	8.1	0.5
W-1210	08-Oct-08	E601	0.52	7.3	<0.5	<0.5	2.1	<1	1.8	1.6	<0.5	25	<0.5
W-1210	22-Jan-09	E601	<0.5	1.2	<0.5	<0.5	17	1.4	5.8	14	<0.5	69	<0.5
W-1210	02-Apr-09	E601	<0.5	2.4	<0.5	<0.5	10	<1	4.2	8.8	<0.5	50	<0.5
W-1210	09-Jul-09	E601	<0.5	2.3	<0.5	<0.5	4.8	<1	2.9	3	<0.5	39	<0.5
<b>TFG-N</b>													
<b>Extraction Wells<sup>b</sup></b>													
W-1806	29-Jan-08	E601	<0.5	1.6	<0.5	<0.5	<0.5	<1	<0.5	13	<0.5	2.6	<0.5
W-1806	09-Apr-08	E601	<0.5	2.4	<0.5	<0.5	<0.5	<1	<0.5	12	<0.5	2.4	<0.5
W-1806	14-Jul-09	E601	<0.5	8.4	<0.5	<0.5	<0.5	<1	<0.5	11	<0.5	1.8	<0.5
W-1806	18-Aug-09	E601	<0.5	7.6	<0.5	<0.5	<0.5	<1	<0.5	9.3	<0.5	1.6	<0.5
W-1806	17-Sep-09	E601	<0.5	8.3	<0.5	<0.5	<0.5	<1	<0.5	11	<0.5	1.8	<0.5
W-1807	29-Jan-08	E601	<0.5	1.7	<0.5	<0.5	1.4	<1	1.5	17	<0.5	5.3	<0.5
W-1807	10-Apr-08	E601	<0.5	2	<0.5	<0.5	1.5	<1	1.5	16	<0.5	5.4	<0.5
W-1807	14-Jul-09	E601	<0.5	3.5	<0.5	<0.5	<0.5	<1	0.77	9.5	<0.5	2.4	<0.5
W-1807	02-Sep-09	E601	<0.5	3	<0.5	<0.5	0.99	<1	1.9	17	<0.5	5.4	<0.5
<b>Monitor Wells<sup>c</sup></b>													
W-1901-1	4-Oct-2007	E601	<0.5	1.2	0.63	<0.5	8.4	<1	1.5	11	<0.5	11	<0.5
W-1901-1	14-Oct-2008	E601	<0.5	1.2	<0.5	<0.5	15	<1	1.3	12	<0.5	12	<0.5
W-1901-1	23-Jun-2009	E601	<0.5	0.84	<0.5	<0.5	3.7	<1	0.66	7.4	<0.5	8.1	<0.5
W-1901-2	24-Mar-09	E601	<0.5	1.4	0.52	<0.5	7	<1	2.3	17	<0.5	10	<0.5
W-1901-2	23-Jun-09	E601	<0.5	1.5	0.59	<0.5	6.9	<1	2.7	21	<0.5	11	<0.5
W-1901-2	24-Sep-09	E601	<0.5	1.2	0.51	<0.5	6	<1	1.8	13	<0.5	7.3	<0.5
W-147	2-Apr-2008	E601	<0.5	4.8	<0.5	1.3	1.4	<1	<0.5	0.92	<0.5	3.1	<0.5
W-147	23-Apr-2009	E601	<0.5	4.1	<0.5	1.1	1.5	<1	<0.5	0.88	<0.5	3.5	<0.5

Addendum. VOC analyses for nearby monitor wells and extraction wells associated with treatment facilities restarted during the 3rd quarter of 2009.

Sample Station	Date Sampled	Analytic Method <sup>a</sup>	CCI4 <-	CHCl3 -	1,1-DCA -	1,2-DCA -	1,1-DCE -	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 - >
<b>TFG-N (cont.)</b>													
<b>Monitor Wells<sup>c</sup></b>													
W-307	4-Mar-2008	E601	<0.5	<b>1.9</b>	<0.5	<0.5	<0.5	<1	<0.5	<b>20</b>	<0.5	<b>32</b>	<0.5
W-307	24-Mar-2009	E601	<0.5	<b>2</b>	<0.5	<0.5	<0.5	<1	<0.5	<b>19</b>	<0.5	<b>33</b>	<0.5
W-307	22-Apr-2009	E601	<0.5	<b>1.7</b>	<0.5	<0.5	<0.5	<1	<0.5	<b>15</b>	<0.5	<b>27</b>	<0.5
W-146	4-Oct-2007	E601	<0.5	<b>6.9</b>	<0.5	<0.5	<0.5	<1	<0.5	<b>0.79</b>	<0.5	<b>2.9</b>	<0.5
W-146	14-Oct-2008	E601	<0.5	<b>3.8</b>	<0.5	<0.5	<0.5	<1	<0.5	<b>1.1</b>	<0.5	<b>2.8</b>	<0.5
W-146	23-Jun-2009	E601	<0.5	<b>5.5</b>	<0.5	<0.5	<0.5	<1	<0.5	<b>0.99</b>	<0.5	<b>2.5</b>	<0.5
W-551	4-Oct-2007	E601	<0.5	<b>2.4</b>	<0.5	<0.5	<0.5	<1	<b>0.95</b>	<b>8.9</b>	<0.5	<b>4.3</b>	<0.5
W-551	14-Oct-2008	E601	<0.5	<b>2.5</b>	<0.5	<0.5	<0.5	<1	<b>1.1</b>	<b>9.5</b>	<0.5	<b>5.1</b>	<0.5
W-551	23-Apr-2009	E601	<0.5	<b>2.2</b>	<0.5	<0.5	<0.5	<1	<b>1.1</b>	<b>9.7</b>	<0.5	<b>4.7</b>	<0.5
<b>TFD-HPD</b>													
<b>Extraction Wells<sup>b</sup></b>													
W-1254	11-Jan-2007	E601	<b>1.2</b>	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>20</b>	<0.5
W-1254	9-May-2007	E601	<b>1.5</b>	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>25</b>	<0.5
W-1254	2-Jul-2007	E601	<b>1.1</b>	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>14</b>	<0.5
W-1254	4-Oct-2007	E601	<b>0.88</b>	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>14</b>	<0.5
W-1254	24-Aug-09	E601	<b>3.4</b>	<b>1.3</b>	<0.5	<0.5	<0.5	<1	<b>0.56</b>	<0.5	<0.5	<b>100</b>	<0.5
W-1254	24-Sep-09	E601	<b>2.3</b>	<b>0.96</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>76</b>	<0.5
W-1551	11-Jan-2007	E601	<b>12</b>	<b>4.2</b>	<0.5	<0.5	<b>2</b>	<1	<b>1.9</b>	<b>3.9</b>	<0.5	<b>190</b>	<0.5
W-1551	9-May-2007	E601	<b>17</b>	<b>5.1</b>	<0.5	<0.5	<b>3.8</b>	<1	<b>2</b>	<b>8.8</b>	<0.5	<b>170</b>	<0.5
W-1551	2-Jul-2007	E601	<b>16</b>	<b>5</b>	<0.5	<0.5	<b>3.1</b>	<1	<b>2.2</b>	<b>7.1</b>	<0.5	<b>170</b>	<0.5
W-1551	6-Aug-2007	E601	<b>6.6</b>	<b>3.2</b>	<0.5	<0.5	<b>0.81</b>	<1	<b>1.1</b>	<b>3.4</b>	<0.5	<b>160</b>	<0.5
W-1551	4-Oct-2007	E601	<b>11</b>	<b>4.4</b>	<0.5	<0.5	<b>1.6</b>	<1	<b>3</b>	<b>3.1</b>	<0.5	<b>210</b>	<0.5
W-1551	24-Aug-09	E601	<b>4</b>	<b>2.1</b>	<0.5	<0.5	<0.5	<1	<b>1.6</b>	<0.5	<0.5	<b>170</b>	<0.5
<b>Monitor Wells<sup>c</sup></b>													
W-1250	24-Jan-2007	E601	<b>27</b>	<b>10</b>	<0.5	<0.5	<b>0.7</b>	<1	<b>4.9</b>	<b>0.93</b>	<0.5	<b>1200</b>	<0.5
W-1250	7-Aug-2007	E601	<b>30</b>	<b>12</b>	<0.5	<0.5	<b>0.81</b>	<1	<b>6.1</b>	<b>0.86</b>	<0.5	<b>1400</b>	<0.5
W-1250	30-Jan-08	E601	<b>25</b>	<b>10</b>	<2.5	<2.5	<2.5	<5	<b>4.4</b>	<2.5	<2.5	<b>1400</b>	<2.5
W-1250	20-Aug-08	E601	<b>27</b>	<b>12</b>	<2.5	<2.5	<2.5	<5	<b>4</b>	<2.5	<2.5	<b>1400</b>	<2.5
W-1250	28-Apr-09	E601	<b>33</b>	<b>14</b>	<2.5	<2.5	<2.5	<5	<b>6.2</b>	<2.5	<2.5	<b>1600</b>	<2.5
W-1250	24-Aug-09	E601	<b>37</b>	<b>13</b>	<2.5	<2.5	<2.5	<5	<b>6.8</b>	<2.5	<2.5	<b>1700</b>	<2.5
W-1251	24-Apr-2007	E601	<b>0.75</b>	<b>1.3</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>56</b>	<0.5
W-1251	25-Oct-2007	E601	<b>0.83</b>	<b>0.76</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>40</b>	<0.5
W-1251	17-Nov-08	E601	<b>0.89</b>	<b>0.78</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>60</b>	<0.5
W-1251	21-Jan-09	E601	<b>0.85</b>	<b>0.81</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>63</b>	<0.5
W-1251	30-Jul-09	E601	<b>0.69</b>	<b>0.77</b>	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<b>50</b>	<0.5
W-1553	13-Feb-2007	E601	<b>2.6</b>	<b>0.9</b>	<0.5	<0.5	<0.5	<1	<b>1</b>	<b>0.55</b>	<0.5	<b>82</b>	<0.5
W-1553	16-May-2007	E601	<b>2.2</b>	<b>0.74</b>	<0.5	<0.5	<0.5	<1	<b>0.75</b>	<0.5	<0.5	<b>76</b>	<0.5
W-1553	12-Jul-2007	E601	<b>2.5</b>	<b>0.73</b>	<0.5	<0.5	<0.5	<1	<b>0.67</b>	<0.5	<0.5	<b>80</b>	<0.5
W-1553	6-Aug-2007	E601	<b>3.5</b>	<b>0.88</b>	<0.5	<0.5	<0.5	<1	<b>1</b>	<0.5	<0.5	<b>110</b>	<0.5
W-1553	6-Nov-2007	E601	<b>2.8</b>	<b>0.81</b>	<0.5	<0.5	<0.5	<1	<b>0.68</b>	<0.5	<0.5	<b>96</b>	<0.5

Addendum. VOC analyses for nearby monitor wells and extraction wells associated with treatment facilities restarted during the 3rd quarter of 2009.

Sample Station	Date Sampled	Analytic Method <sup>a</sup>	CCI4 <-	CHCl3 -	1,1-DCA -	1,2-DCA -	1,1-DCE -	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TFD-HPD (cont.)</b>													
<b>Monitor Wells<sup>c</sup></b>													
W-1553	20-Dec-2007	E601	3.1	0.84	<0.5	<0.5	<0.5	<1	0.72	<0.5	<0.5	110	<0.5
W-1553	21-Apr-08	E601	4.1	0.93	<0.5	<0.5	<0.5	<1	1.2	<0.5	<0.5	130	<0.5
W-1553	10-Sep-08	E601	5	1	<0.5	<0.5	<0.5	<1	1.6	0.64	<0.5	170	<0.5
W-1553	08-Oct-08	E601	4	0.98	<0.5	<0.5	<0.5	<1	1.4	<0.5	<0.5	130	<0.5
W-1553	21-Jan-09	E601	4.3	1	<0.5	<0.5	<0.5	<1	1.5	<0.5	<0.5	150	<0.5
W-1553	18-May-09	E601	6.9	1.4	<0.5	<0.5	<0.5	<1	3.2	0.62	<0.5	250	<0.5
W-1553	11-Aug-09	E601	10	1.8	<0.5	<0.5	<0.5	<1	4.5	0.62	<0.5	300	<0.5
W-2304	19-Nov-2007	E601	22	4.1	<0.5	<0.5	0.91	<1	12	1.4	<0.5	500	<0.5
W-2304	20-Dec-2007	E601	19	3.6	<0.5	<0.5	0.68	<1	8.5	1.1	<0.5	560	<0.5
W-2304	05-Mar-08	E601	11	2.1	<0.5	<0.5	<0.5	<1	5.2	0.85	<0.5	300	<0.5
W-2304	16-Apr-08	E601	13	2.6	<0.5	<0.5	0.5	<1	5.3	0.72	<0.5	350	<0.5
W-2304	12-Aug-08	E601	7.3	1.9	<0.5	<0.5	<0.5	<1	3.1	<0.5	<0.5	200	<0.5
W-2304	13-Oct-08	E601	13	3	<0.5	<0.5	<0.5	<1	5.5	0.62	<0.5	460	<0.5
W-2304	05-Feb-09	E601	11	2.6	<0.5	<0.5	<0.5	<1	5.1	0.61	<0.5	370	<0.5
W-2304	19-Aug-09	E601	9.2	1.8	<0.5	<0.5	<0.5	<1	3.8	<0.5	<0.5	320	<0.5
<b>VTFE-ELM</b>													
<b>Extraction Wells<sup>b</sup></b>													
W-543-001	3-Jan-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	0.13	<0.005	0.018	0.91	0.0095	0.42	<0.005
W-543-001	10-Jan-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	0.1	<0.005	0.012	0.83	0.0051	0.33	<0.005
W-543-001	17-Jan-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	0.069	<0.005	0.016	0.56	<0.005	0.22	<0.005
W-543-001	29-Jan-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	0.044	<0.005	0.0088	0.65	<0.005	0.2	<0.005
W-543-001	5-Feb-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	0.0096	<0.005	<0.005	0.13	<0.005	0.038	<0.005
W-543-001	1-Jul-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.11	<0.005	0.017	0.34	<0.005	0.32	<0.005
W-543-003	3-Jan-2008	TO15DI	<0.005	0.02	<0.005	<0.005	0.27	<0.005	0.04	0.43	<0.005	1.1	<0.005
W-543-003	10-Jan-2008	TO15DI	<0.005	0.021	<0.005	<0.005	0.25	<0.005	0.046	0.37	<0.005	1	0.0055
W-543-003	17-Jan-2008	TO15DI	<0.005	0.019	<0.005	<0.005	0.2	<0.005	0.044	0.3	<0.005	0.87	<0.005
W-543-003	29-Jan-2008	TO15DI	<0.005	0.018	<0.005	<0.005	0.13	<0.005	0.029	0.32	<0.005	0.81	<0.005
W-543-003	5-Feb-2008	TO15DI	<0.005	0.0069	<0.005	<0.005	0.052	<0.005	0.012	0.11	<0.005	0.29	<0.005
W-543-003	1-Jul-2009	TO15DIT	<0.005	0.0061	<0.005	<0.005	0.21	<0.005	0.033	0.27	<0.005	0.67	<0.005
W-543-003	3-Sep-2009	TO15DIT	<0.011	0.012	<0.011	<0.011	0.27	<0.011	0.072	0.44	<0.011	0.79	<0.011
W-543-003	10-Sep-2009	TO15DIT	<0.005	0.012	<0.005	<0.005	0.26	0.0062	0.067	0.47	0.017	0.81	<0.005
W-543-003	17-Sep-2009	TO15DIT	<0.005	0.015	0.018	<0.005	0.29	0.0057	0.074	0.57	0.018	0.92	0.011
W-543-1908	3-Jan-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	0.041	<0.005	0.01	0.21	<0.005	0.49	<0.005
W-543-1908	10-Jan-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	0.034	<0.005	0.012	0.18	<0.005	0.38	<0.005
W-543-1908	17-Jan-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	0.027	<0.005	0.009	0.14	<0.005	0.32	<0.005
W-543-1908	29-Jan-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	0.02	<0.005	0.0086	0.17	<0.005	0.27	<0.005
W-543-1908	5-Feb-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.015	<0.005	0.023	<0.005
W-543-1908	1-Jul-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.072	<0.005	0.019	0.13	<0.005	0.33	<0.005
<b>Monitor Wells<sup>c</sup></b>													
W-543-002A	1-Jul-2009	TO15DIT	<0.01	<0.01	<0.01	<0.01	0.048	<0.01	0.014	0.075	<0.01	0.047	<0.01
W-543-002B	1-Jul-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.085	<0.005	0.022	0.15	<0.005	0.14	<0.005

Addendum. VOC analyses for nearby monitor wells and extraction wells associated with treatment facilities restarted during the 3rd quarter of 2009.

Sample Station	Date Sampled	Analytic Method <sup>a</sup>	CCI4 <-	CHCl3 -	1,1-DCA -	1,2-DCA -	1,1-DCE -	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>VTFE-ELM (cont.)</b>													
<b>Monitor Wells<sup>c</sup></b>													
W-543-004A	8-Jul-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.2	<0.005	0.014	0.81	0.0066	0.68	<0.005
W-543-004B	8-Jul-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.36	<0.005	0.044	0.81	<0.005	0.85	<0.005
W-909	9-Jul-2009	TO15DIT	<0.01	<0.01	<0.01	<0.01	0.35	<0.01	0.064	0.59	<0.01	0.66	<0.01
W-257	10-Jul-2009	TO15DIT	<0.017	<0.017	0.042	<0.017	12	0.034	4.4	5.2	<0.017	6.6	0.026
W-1903	16-Jul-2007	TO15DI	<0.005	<0.005	<0.005	<0.005	0.38	<0.005	0.15	0.031	<0.005	0.074	<0.005
W-1903	14-Aug-2007	TO15DI	<0.008	<0.008	<0.008	<0.008	1.3	<0.008	0.56	1.1	<0.008	0.97	<0.008
W-1903	15-Aug-2007	TO15DI	<0.0066	<0.0066	<0.0066	<0.0066	1.2	<0.0066	0.36	0.96	<0.0066	0.95	<0.0066
W-1903	16-Aug-2007	TO15DI	<0.0084	<0.0084	<0.0084	<0.0084	1.4	<0.0084	0.36	1.4	<0.0084	1.5	<0.0084
W-1903	8-Jul-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
W-1909	16-Jul-2007	TO15DI	<0.008	<0.008	<0.008	<0.008	1.2	<0.008	0.36	0.04	<0.008	0.19	<0.008
W-1909	10-Jul-2009	TO15DIT	<0.005	<0.005	0.0058	<0.005	0.95	<0.005	0.44	0.75	<0.005	1.5	<0.005
W-2305	16-Jul-2007	TO15DI	<0.025	<0.025	<0.025	<0.025	4.8	<0.025	1.8	0.44	<0.025	1.9	<0.025
W-2305	14-Aug-2007	TO15DI	<0.02	<0.02	<0.02	<0.02	0.54	<0.02	0.1	1.7	<0.02	2.5	<0.02
W-2305	15-Aug-2007	TO15DI	<0.005	<0.005	<0.005	<0.005	0.013	<0.005	<0.005	0.14	<0.005	0.14	<0.005
W-2305	16-Aug-2007	TO15DI	<0.005	<0.005	<0.005	<0.005	0.014	<0.005	0.016	0.064	<0.005	0.069	<0.005
W-2305	10-Jul-2009	TO15DIT	<0.01	<0.01	<0.01	<0.01	6	0.012	2.3	3.3	<0.01	7.5	0.014
<b>VTFD-ETC-S</b>													
<b>Extraction Wells<sup>b</sup></b>													
SIP-ETC-201	26-Mar-2007	TO15DI	<0.005	0.0083	0.026	0.0066	0.073	<0.005	<0.005	1.9	<0.005	0.86	<0.005
SIP-ETC-201	19-Jun-2007	TO15DI	<0.005	<0.005	0.0053	<0.005	0.077	<0.005	<0.005	0.86	<0.005	0.3	<0.005
SIP-ETC-201	19-Jun-2007	TO15DI	<0.016	<0.016	0.026	<0.016	0.11	<0.016	<0.016	2.2	<0.016	0.96	<0.016
SIP-ETC-201	26-Jun-2007	TO15DI	<0.02	<0.02	0.032	<0.02	0.073	<0.02	<0.02	2	<0.02	1	<0.02
SIP-ETC-201	12-Jul-2007	TO15DI	<0.01	<0.01	0.023	<0.01	0.054	<0.01	<0.01	1.6	<0.01	0.8	<0.01
SIP-ETC-201	9-Jun-2009	TO15DIT	<0.005	0.009	0.037	0.0059	0.65	<0.005	<0.005	2.9	<0.005	1.4	<0.005
W-1904	26-Mar-2007	TO15DI	<0.005	<0.005	<0.005	<0.005	0.089	<0.005	<0.005	1.3	<0.005	0.37	<0.005
W-1904	19-Jun-2007	TO15DI	<0.005	<0.005	<0.005	<0.005	0.027	<0.005	<0.005	0.18	<0.005	0.082	<0.005
W-1904	19-Jun-2007	TO15DI	<0.0084	<0.0084	<0.0084	<0.0084	0.11	<0.0084	<0.0084	1.3	<0.0084	0.38	<0.0084
W-1904	26-Jun-2007	TO15DI	<0.02	<0.02	<0.02	<0.02	0.12	<0.02	<0.02	2.2	<0.02	0.64	<0.02
W-1904	9-Jun-2009	TO15DIT	<0.005	0.041	0.0056	<0.005	0.25	<0.005	<0.005	2.1	<0.005	0.67	<0.005
W-ETC-2003	26-Mar-2007	TO15DI	<0.005	<0.005	<0.005	<0.005	0.03	<0.005	<0.005	1.2	<0.005	0.33	<0.005
W-ETC-2003	19-Jun-2007	TO15DI	<0.005	<0.005	<0.005	<0.005	0.015	<0.005	<0.005	0.13	<0.005	0.069	<0.005
W-ETC-2003	19-Jun-2007	TO15DI	<0.005	<0.005	<0.005	<0.005	0.026	<0.005	<0.005	0.86	<0.005	0.25	<0.005
W-ETC-2003	26-Jun-2007	TO15DI	<0.012	<0.012	<0.012	<0.012	0.031	<0.012	<0.012	1.3	<0.012	0.38	<0.012
W-ETC-2003	12-Jul-2007	TO15DI	<0.008	<0.008	<0.008	<0.008	0.022	<0.008	<0.008	1.1	<0.008	0.26	<0.008
W-ETC-2003	9-Jun-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.012	<0.005	<0.005	1.3	<0.005	0.31	<0.005
W-ETC-2003	23-Jul-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.052	<0.005	<0.005	1.6	<0.005	0.42	<0.005

Addendum. VOC analyses for nearby monitor wells and extraction wells associated with treatment facilities restarted during the 3rd quarter of 2009.

Sample Station	Date Sampled	Analytic Method <sup>a</sup>	CCl4 <-	CHCl3 -	1,1-DCA -	1,2-DCA -	1,1-DCE -	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 - >
<b>VTFD-ETC-S (cont.)</b>													
<b>Extraction Wells<sup>b</sup></b>													
W-ETC-2003	13-Aug-2009	TO15DIT	<b>0.0052</b>	<0.005	<0.005	<0.005	<b>0.045</b>	<0.005	<0.005	<b>1</b>	<0.005	<b>0.3</b>	<0.005
W-ETC-2003	20-Aug-2009	TO15DIT	<0.01	<0.01	<0.01	<0.01	<b>0.046</b>	<0.01	<0.01	<b>0.97</b>	<0.01	<b>0.25</b>	<0.01
W-ETC-2003	27-Aug-2009	TO15DIT	<0.012	<0.012	<0.012	<0.012	<b>0.044</b>	<0.012	<0.012	<b>0.99</b>	<0.012	<b>0.25</b>	<0.012
W-ETC-2003	17-Sep-2009	TO15DIT	<b>0.0057</b>	<0.005	<0.005	<0.005	<b>0.044</b>	<0.005	<0.005	<b>0.89</b>	<0.005	<b>0.23</b>	<0.005
W-ETC-2004A	26-Mar-2007	TO15DI	<0.005	<b>0.0059</b>	<0.005	<0.005	<b>0.021</b>	<0.005	<0.005	<b>1.8</b>	<0.005	<b>0.56</b>	<0.005
W-ETC-2004A	19-Jun-2007	TO15DI	<0.005	<0.005	<0.005	<0.005	<b>0.013</b>	<0.005	<0.005	<b>0.32</b>	<0.005	<b>0.12</b>	<0.005
W-ETC-2004A	19-Jun-2007	TO15DI	<0.017	<0.017	<0.017	<0.017	<b>0.042</b>	<0.017	<0.017	<b>2.6</b>	<0.017	<b>0.84</b>	<0.017
W-ETC-2004A	26-Jun-2007	TO15DI	<0.012	<0.012	<0.012	<0.012	<b>0.031</b>	<0.012	<0.012	<b>2.2</b>	<0.012	<b>0.7</b>	<0.012
W-ETC-2004A	12-Jul-2007	TO15DI	<0.01	<0.01	<0.01	<0.01	<b>0.021</b>	<0.01	<0.01	<b>1.6</b>	<0.01	<b>0.5</b>	<0.01
W-ETC-2004A	9-Jun-2009	TO15DIT	<0.005	<b>0.0098</b>	<0.005	<0.005	<b>0.039</b>	<0.005	<0.005	<b>2</b>	<0.005	<b>0.75</b>	<0.005
W-ETC-2004A	23-Jul-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	<b>0.016</b>	<0.005	<0.005	<b>1.5</b>	<0.005	<b>0.32</b>	<0.005
W-ETC-2004A	13-Aug-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	<b>0.0098</b>	<0.005	<0.005	<b>1.2</b>	<0.005	<b>0.25</b>	<0.005
W-ETC-2004A	20-Aug-2009	TO15DIT	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<b>1.5</b>	<0.011	<b>0.3</b>	<0.011
W-ETC-2004A	27-Aug-2009	TO15DIT	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<b>1.4</b>	<0.012	<b>0.29</b>	<0.012
W-ETC-2004A	17-Sep-2009	TO15DIT	<0.0072	<b>0.0087</b>	<0.0072	<0.0072	<0.0072	<0.0072	<0.0072	<b>1.3</b>	<0.0072	<b>0.28</b>	<0.0072
W-ETC-2004B	26-Mar-2007	TO15DI	<b>0.0092</b>	<b>0.013</b>	<b>0.031</b>	<b>0.0098</b>	<b>0.21</b>	<0.008	<0.008	<b>4.1</b>	<0.008	<b>2.2</b>	<0.008
W-ETC-2004B	19-Jun-2007	TO15DI	<0.005	<0.005	<0.005	<0.005	<b>0.017</b>	<0.005	<0.005	<b>0.12</b>	<0.005	<b>0.078</b>	<0.005
W-ETC-2004B	19-Jun-2007	TO15DI	<0.029	<0.029	<b>0.034</b>	<0.029	<b>0.24</b>	<0.029	<0.029	<b>4.4</b>	<0.029	<b>2.4</b>	<0.029
W-ETC-2004B	26-Jun-2007	TO15DI	<0.02	<0.02	<b>0.02</b>	<0.02	<b>0.18</b>	<0.02	<0.02	<b>3.4</b>	<0.02	<b>1.7</b>	<0.02
W-ETC-2004B	12-Jul-2007	TO15DI	<0.02	<0.02	<0.02	<0.02	<b>0.18</b>	<0.02	<0.02	<b>3.3</b>	<0.02	<b>1.7</b>	<0.02
W-ETC-2004B	9-Jun-2009	TO15DIT	<0.01	<b>0.16</b>	<b>0.036</b>	<0.01	<b>0.49</b>	<0.01	<0.01	<b>6.4</b>	<0.01	<b>3.2</b>	<0.01
W-ETC-2004B	23-Jul-2009	TO15DIT	<0.005	<b>0.026</b>	<b>0.016</b>	<0.005	<b>0.13</b>	<0.005	<0.005	<b>3.6</b>	<0.005	<b>2.5</b>	<0.005
W-ETC-2004B	13-Aug-2009	TO15DIT	<0.005	<b>0.028</b>	<b>0.014</b>	<0.005	<b>0.14</b>	<0.005	<0.005	<b>3.5</b>	<0.005	<b>2.3</b>	<0.005
W-ETC-2004B	20-Aug-2009	TO15DIT	<0.025	<b>0.028</b>	<0.025	<0.025	<b>0.13</b>	<0.025	<0.025	<b>3.1</b>	<0.025	<b>2.3</b>	<0.025
W-ETC-2004B	27-Aug-2009	TO15DIT	<0.03	<b>0.037</b>	<0.03	<0.03	<b>0.15</b>	<0.03	<0.03	<b>3.5</b>	<0.03	<b>2.6</b>	<0.03
W-ETC-2004B	17-Sep-2009	TO15DIT	<0.017	<b>0.038</b>	<0.017	<0.017	<b>0.15</b>	<0.017	<0.017	<b>3.3</b>	<0.017	<b>2.5</b>	<0.017
<b>Monitor Wells<sup>c</sup></b>													
W-207	10-Jun-2009	TO15DIT	<b>0.015</b>	<b>0.0073</b>	<0.005	<0.005	<b>0.12</b>	<0.005	<0.005	<b>1.8</b>	<0.005	<b>0.6</b>	<0.005
W-ETC-2001A	10-Jun-2009	TO15DIT	<0.005	<b>0.011</b>	<0.005	<0.005	<b>0.033</b>	<0.005	<0.005	<b>2.4</b>	<0.005	<b>0.72</b>	<0.005
W-ETC-2001B	10-Jun-2009	TO15DIT	<0.005	<b>0.0054</b>	<b>0.0058</b>	<0.005	<b>0.074</b>	<b>0.008</b>	<0.005	<b>1.2</b>	<0.005	<b>0.69</b>	<0.005
W-ETC-2002A	10-Jun-2009	TO15DIT	<0.005	<b>0.28</b>	<0.005	<0.005	<b>0.014</b>	<0.005	<0.005	<b>1.7</b>	<b>0.013</b>	<b>0.57</b>	<b>0.0066</b>
W-ETC-2002B	10-Jun-2009	TO15DIT	<0.005	<b>0.022</b>	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.036</b>	<0.005	<b>0.0097</b>	<0.005
SIP-ETC-301	11-Jun-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.0093</b>	<0.005	<b>0.027</b>	<0.005
<b>VTFE-HS Extraction Wells<sup>b</sup></b>													
W-2105	30-Jan-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	<b>0.014</b>	<0.005	<b>0.01</b>	<b>0.022</b>	<0.005	<b>0.13</b>	<0.005

Addendum. VOC analyses for nearby monitor wells and extraction wells associated with treatment facilities restarted during the 3rd quarter of 2009.

Sample Station	Date Sampled	Analytic Method <sup>a</sup>	CCl4 <-	CHCl3 -	1,1-DCA -	1,2-DCA -	1,1-DCE -	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 - >	
<b>VTFE-HS (cont.)</b>														
<b>Extraction Wells<sup>b</sup></b>														
W-ETS-2008A	30-Jan-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.031	<0.005	0.057	<0.005	
W-ETS-2008A	5-Aug-2009	TO15DIT	<0.005	0.012	0.14	0.0052	0.056	0.27	0.13	0.14	0.54	1.2	0.012	
W-ETS-2008A	10-Sep-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.006	0.01	<0.005	0.096	0.027	0.18	<0.005	
W-ETS-2008A	17-Sep-2009	TO15DIT	<0.005	<0.005	0.027	<0.005	<0.005	<0.005	<0.005	0.092	0.025	0.16	<0.005	
W-ETS-2008B	5-Feb-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.015	0.14	<0.005	0.4	<0.005	
W-ETS-2008B	5-Aug-2009	TO15DIT	<0.005	0.011	0.12	0.0051	0.049	0.23	0.096	0.13	0.46	1.1	0.01	
W-ETS-2008B	10-Sep-2009	TO15DIT	<0.025	<0.025	<0.025	<0.025	0.038	<0.025	0.16	1.1	<0.025	3.3	<0.025	
W-ETS-2008B	17-Sep-2009	TO15DIT	<0.021	<0.021	<0.021	<0.021	0.043	0.021	0.14	1.1	<0.021	3.4	<0.021	
W-ETS-2009	30-Jan-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.062	<0.005	0.092	<0.005	
W-ETS-2009	5-Aug-2009	TO15DIT	<0.005	<0.005	0.032	<0.005	0.014	0.062	0.028	0.069	0.12	0.62	<0.005	
W-ETS-2009	13-Aug-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.022	<0.005	0.18	<0.005	
W-ETS-2010A	30-Jan-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.046	<0.005	0.096	<0.005	
W-ETS-2010A	5-Aug-2009	TO15DIT	<0.005	<0.005	0.018	<0.005	0.012	0.037	0.047	0.075	0.069	0.87	<0.005	
W-ETS-2010A	10-Sep-2009	TO15DIT	<0.01	<0.01	<0.01	<0.01	0.011	0.017	<0.01	0.088	0.046	0.3	<0.01	
W-ETS-2010A	17-Sep-2009	TO15DIT	<0.005	<0.005	0.0086	<0.005	<0.005	0.0078	0.096	0.0078	0.078	0.33	<0.005	
W-ETS-2010B	30-Jan-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	0.021	0.0054	0.058	0.37	<0.005	1	<0.005	
W-ETS-2010B	5-Aug-2009	TO15DIT	<0.005	<0.005	0.016	<0.005	0.011	0.03	0.046	0.095	0.051	1	<0.005	
<b>Monitor Wells<sup>c</sup></b>														
W-259	7-Aug-2009	TO15DIT	<0.005	<0.005	<0.005	0.012	<0.005	<0.005	0.0057	0.0073	0.12	0.029	<0.005	
SIP-ETS-405	7-Aug-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0075	0.0075	0.039	0.012	<0.005
<b>VTFD-HS</b>														
<b>Extraction Wells<sup>b</sup></b>														
W-2011	15-Feb-2007	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.081	<0.005	
W-2101	15-Feb-2007	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.061	<0.005	
W-2102	15-Feb-2007	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.11	<0.005	
<b>Monitor Wells<sup>c</sup></b>														
W-1207	7-Aug-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.015	<0.005	<0.005	
W-2104A	7-Aug-2009	TO15DIT	<0.005	<0.005	0.011	0.032	0.0072	0.0078	0.014	0.017	0.3	0.092	0.0058	
W-2104B	7-Aug-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	0.11	<0.005	
<b>VTFD-HPD</b>														
<b>Extraction Wells<sup>b</sup></b>														
W-HPA-002A	23-Jul-2009	TO15DIT	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	0.15	<0.011	
W-HPA-002B	13-Feb-2007	TO15DI	0.042	0.035	<0.005	<0.005	0.013	<0.005	<0.005	0.12	<0.005	1.6	<0.005	
W-HPA-002B	14-Jun-2007	TO15DI	0.024	0.02	<0.013	<0.013	<0.013	<0.013	<0.013	0.079	<0.013	0.83	<0.013	
W-HPA-002B	3-Jul-2007	TO15DI	0.032	0.024	<0.0057	<0.0057	0.011	<0.0057	<0.0057	0.1	<0.0057	1	<0.0057	
W-HPA-002B	23-Jul-2009	TO15DIT	<0.011	0.011	<0.011	<0.011	<0.011	<0.011	<0.011	0.056	<0.011	0.46	<0.011	

Addendum. VOC analyses for nearby monitor wells and extraction wells associated with treatment facilities restarted during the 3rd quarter of 2009.

Sample Station	Date Sampled	Analytic Method <sup>a</sup>	CCI4 <-	CHCl3 -	1,1-DCA -	1,2-DCA -	1,1-DCE -	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->	
<b>VTFD-HPD (cont.)</b>														
<b>Monitor Wells<sup>c</sup></b>														
W-HPA-001A	23-Jul-2009	TO15DIT	<b>0.058</b>	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	1.2	<0.01
W-HPA-001B	23-Jul-2009	TO15DIT	<b>0.16</b>	<b>0.028</b>	<0.01	<0.01	<0.01	<0.01	<b>0.016</b>	<b>0.014</b>	<0.01	5.1	<0.01	
SIP-HPA-001	23-Jul-2009	TO15DIT	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	0.05	<0.012	
SIP-HPA-201	23-Jul-2009	TO15DIT	<b>0.18</b>	<b>0.042</b>	<0.01	<0.01	<b>0.013</b>	<0.01	0.028	<b>0.019</b>	<0.01	6.4	<b>0.024</b>	
W-2112A	15-Nov-2005	TO15DI	<b>0.051</b>	<b>0.033</b>	<0.005	<0.005	<b>0.0072</b>	<0.005	<0.005	<b>0.054</b>	<0.005	<b>0.64</b>	<0.005	
W-2112A	23-Jul-2009	TO15DIT	<b>0.29</b>	<b>0.13</b>	<0.011	<0.011	<b>0.095</b>	<0.011	<b>0.012</b>	<b>0.29</b>	<0.011	<b>2.4</b>	<0.011	
W-2112B	17-Nov-2005	TO15DI	<b>1.1</b>	<b>0.35</b>	<b>0.012</b>	<0.011	<b>0.42</b>	<0.011	<b>0.074</b>	<b>1.6</b>	<0.011	<b>11</b>	<0.011	
W-2112B	23-Jul-2009	TO15DIT	<b>0.5</b>	<b>0.33</b>	<b>0.013</b>	<0.011	<b>0.47</b>	<0.011	<b>0.025</b>	<b>1.5</b>	<0.011	<b>7.2</b>	<0.011	
<b>TF518-PZ</b>														
<b>Extraction Wells<sup>b</sup></b>														
W-518-1915	15-Jan-2008	TO15DI	<0.0066	<0.0066	<0.0066	<0.0066	<b>0.29</b>	<0.0066	<b>0.01</b>	<b>1.6</b>	<0.0066	<b>5.9</b>	<0.0066	
W-518-1915	17-Aug-2009	TO15DIT	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<b>1.2</b>	<0.42	
W-1615	15-Jan-2008	TO15DI	<b>0.1</b>	<0.025	<0.025	<0.025	<b>0.96</b>	<0.025	<b>0.96</b>	<b>8.7</b>	<0.025	<b>17</b>	<0.025	
W-1615	17-Aug-2009	TO15DIT	<0.033	<0.033	<0.033	<0.033	<b>0.035</b>	<0.033	<0.033	<b>0.7</b>	<0.033	<b>3.8</b>	<0.033	
SVB-518-201	15-Jan-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	<b>0.016</b>	<0.005	<0.005	<b>3.9</b>	<0.005	<b>0.34</b>	<0.005	
SVB-518-201	14-Aug-2009	TO15DIT	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<b>0.26</b>	<0.076	
SVB-518-204	6-Mar-2007	TO15DI	<0.013	<0.013	<0.013	<0.013	<b>0.11</b>	<0.013	<b>0.023</b>	<b>2.4</b>	<0.013	<b>11</b>	<0.013	
SVB-518-204	17-Apr-2007	TO15DI	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<b>1.7</b>	<0.012	<b>10</b>	<0.012	
SVB-518-204	11-Jul-2007	TO15DI	<0.066	<0.066	<0.066	<0.066	<b>0.091</b>	<0.066	<0.066	<b>1.9</b>	<0.066	<b>11</b>	<0.066	
SVB-518-204	4-Oct-2007	TO15DI	<0.025	<0.025	<0.025	<0.025	<b>0.089</b>	<0.025	<0.025	<b>3</b>	<0.025	<b>16</b>	<0.025	
SVB-518-204	15-Jan-2008	TO15DI	<0.02	<0.02	<0.02	<0.02	<b>0.051</b>	<0.02	<0.02	<b>2.4</b>	<0.02	<b>15</b>	<0.02	
W-518-1913	15-Jan-2008	TO15DI	<b>0.012</b>	<b>0.006</b>	<b>0.007</b>	<0.005	<b>1.7</b>	<0.005	<b>0.063</b>	<b>2</b>	<0.005	<b>4.5</b>	<0.005	
W-518-1913	17-Aug-2009	TO15DIT	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<b>0.19</b>	<0.17	
W-518-1914	15-Jan-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.98</b>	<0.005	<b>0.28</b>	<0.005	
W-518-1914	17-Aug-2009	TO15DIT	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<b>1.1</b>	<0.12	<b>0.61</b>	<0.12	
W-518-1915	15-Jan-2008	TO15DI	<0.0066	<0.0066	<0.0066	<0.0066	<b>0.29</b>	<0.0066	<b>0.01</b>	<b>1.6</b>	<0.0066	<b>5.9</b>	<0.0066	
W-518-1915	17-Aug-2009	TO15DIT	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<b>1.2</b>	<0.42	
<b>Monitor Wells<sup>c</sup></b>														
W-518-301A	14-Aug-2009	TO15DIT	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	
W-518-301B	14-Aug-2009	TO15DIT	<0.043	<0.043	<0.043	<0.043	<0.043	<0.043	<0.043	<0.043	<0.043	<0.043	<0.043	

Addendum. VOC analyses for nearby monitor wells and extraction wells associated with treatment facilities restarted during the 3rd quarter of 2009.

Sample Station	Date Sampled	Analytic Method <sup>a</sup>	CCl4 <-	CHCl3 -	1,1-DCA -	1,2-DCA -	1,1-DCE -	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
<b>TF518-PZ (cont.)</b>													
<b>Monitor Wells<sup>c</sup></b>													
W-518-304A	14-Aug-2009	TO15DIT	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<b>0.49</b>	<b>0.025</b>	<b>1.1</b>	<0.012
W-518-304B	14-Aug-2009	TO15DIT	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<b>0.014</b>	<0.013
W-518-1616A	14-Aug-2009	TO15DIT	<0.012	<0.012	<0.012	<0.012	<b>0.037</b>	<0.012	<0.012	<b>0.51</b>	<0.012	<b>1.9</b>	<0.012
W-518-1616B	14-Aug-2009	TO15DIT	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011
SVB-518-202	14-Aug-2009	TO15DIT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<b>0.015</b>	<b>0.012</b>	<0.01	<b>0.051</b>	<0.01
SVB-518-302	14-Aug-2009	TO15DIT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<b>0.026</b>	<b>0.014</b>	<b>0.21</b>	<0.01
W-2214A	17-Aug-2009	TO15DIT	<0.05	<b>0.056</b>	<0.05	<0.05	<b>0.14</b>	<0.05	<0.05	<0.05	<0.05	<0.05	<b>9.6</b>
W-2214B	17-Aug-2009	TO15DIT	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<b>0.15</b>	<0.05
W-2215A	17-Aug-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.042</b>
W-2215B	17-Aug-2009	TO15DIT	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
W-2217A	17-Aug-2009	TO15DIT	<0.01	<b>0.013</b>	<0.01	<0.01	<b>0.12</b>	<b>0.025</b>	<0.01	<0.01	<0.01	<b>1.7</b>	<0.01
W-2217B	17-Aug-2009	TO15DIT	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
<b>VTF518-PZ</b>													
<b>Extraction Wells<sup>b</sup></b>													
W-1615	15-Jan-2008	TO15DI	<b>0.1</b>	<0.025	<0.025	<0.025	<b>0.96</b>	<0.025	<b>0.96</b>	<b>8.7</b>	<0.025	<b>17</b>	<0.025
W-1615	17-Aug-2009	TO15DIT	<0.033	<0.033	<0.033	<0.033	<b>0.035</b>	<0.033	<0.033	<b>0.7</b>	<0.033	<b>3.8</b>	<0.033
SVB-518-201	15-Jan-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	<b>0.016</b>	<0.005	<0.005	<b>3.9</b>	<0.005	<b>0.34</b>	<0.005
SVB-518-201	14-Aug-2009	TO15DIT	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<b>0.26</b>	<0.076
SVB-518-204	6-Mar-2007	TO15DI	<0.013	<0.013	<0.013	<0.013	<b>0.11</b>	<0.013	0.023	<b>2.4</b>	<0.013	<b>11</b>	<0.013
SVB-518-204	17-Apr-2007	TO15DI	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<b>1.7</b>	<0.012	<b>10</b>	<0.012
SVB-518-204	11-Jul-2007	TO15DI	<0.066	<0.066	<0.066	<0.066	<b>0.091</b>	<0.066	<0.066	<b>1.9</b>	<0.066	<b>11</b>	<0.066
SVB-518-204	4-Oct-2007	TO15DI	<0.025	<0.025	<0.025	<0.025	<b>0.089</b>	<0.025	<0.025	<b>3</b>	<0.025	<b>16</b>	<0.025
SVB-518-204	15-Jan-2008	TO15DI	<0.02	<0.02	<0.02	<0.02	<b>0.051</b>	<0.02	<0.02	<b>2.4</b>	<0.02	<b>15</b>	<0.02
W-518-1913	15-Jan-2008	TO15DI	<b>0.012</b>	<b>0.006</b>	<b>0.007</b>	<0.005	<b>1.7</b>	<0.005	<b>0.063</b>	<b>2</b>	<0.005	<b>4.5</b>	<0.005
W-518-1913	17-Aug-2009	TO15DIT	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<b>0.19</b>	<0.17
W-518-1914	15-Jan-2008	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<b>0.98</b>	<0.005	<b>0.28</b>	<0.005
W-518-1914	17-Aug-2009	TO15DIT	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<b>1.1</b>	<0.12	<b>0.61</b>	<0.12
W-518-1915	15-Jan-2008	TO15DI	<0.0066	<0.0066	<0.0066	<0.0066	<b>0.29</b>	<0.0066	<b>0.01</b>	<b>1.6</b>	<0.0066	<b>5.9</b>	<0.0066

Addendum. VOC analyses for nearby monitor wells and extraction wells associated with treatment facilities restarted during the 3rd quarter of 2009.

Sample Station	Date Sampled	Analytic Method <sup>a</sup>	CCI4 <-	CHCl3	1,1-DCA	1,2-DCA	1,1-DCE	1,2-DCE	Freon 113	PCE	1,1,1-TCA	TCE	Freon 11 ->
<b>VTF518-PZ (cont.)</b>													
<b>Monitor Wells<sup>c</sup></b>													
W-518-1915	17-Aug-2009	TO15DIT	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	1.2	<0.42
W-518-301A	14-Aug-2009	TO15DIT	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
W-518-301B	14-Aug-2009	TO15DIT	<0.043	<0.043	<0.043	<0.043	<0.043	<0.043	<0.043	<0.043	<0.043	<0.043	<0.043
W-518-304A	14-Aug-2009	TO15DIT	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	0.49	0.025	1.1	<0.012
W-518-304B	14-Aug-2009	TO15DIT	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.014	<0.013
W-518-1616A	14-Aug-2009	TO15DIT	<0.012	<0.012	<0.012	<0.012	0.037	<0.012	<0.012	0.51	<0.012	1.9	<0.012
W-518-1616B	14-Aug-2009	TO15DIT	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011
SVB-518-202	14-Aug-2009	TO15DIT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	0.012	<0.01	0.051	<0.01
SVB-518-302	14-Aug-2009	TO15DIT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.026	0.014	0.21	<0.01
W-2214A	17-Aug-2009	TO15DIT	<0.05	0.056	<0.05	<0.05	0.14	<0.05	<0.05	<0.05	<0.05	9.6	<0.05
W-2214B	17-Aug-2009	TO15DIT	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.15	<0.05
W-2215A	17-Aug-2009	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.042	<0.005
W-2215B	17-Aug-2009	TO15DIT	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
W-2217A	17-Aug-2009	TO15DIT	<0.01	0.013	<0.01	<0.01	0.12	0.025	<0.01	<0.01	<0.01	1.7	<0.01
W-2217B	17-Aug-2009	TO15DIT	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012

Notes on following page.

**Addendum. VOC analyses for nearby monitor wells and extraction wells associated with treatment facilities restarted during the 3rd quarter of 2009.**

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<sup>a</sup> EPA Method 601 and TO15DIT analytical methods were used to determine VOCs in ground water (ppb) and soil vapor (ppm [v/v]), respectively.

<sup>b</sup> Extraction well analytical results.

<sup>c</sup> Monitor well analytical results.

Notes:

CCl<sub>4</sub> = Carbon tetrachloride

CHCl<sub>3</sub> = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

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**Attachment B**

**Self-Monitoring Reports**

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**Self-Monitoring Report  
LLNL Treatment Facility A (TFA)  
AREA TFA**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline ) treated ground water was discharged

July        **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): **695**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **07-06-2009**

Influent pH: **7.5**

Effluent pH: **7.5**

Effluent Temperature (°C): **20**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-408	1,112,500	27.2
W-109	1,310,900	31.9
W-457	274,100	6.6
W-522	0	0.0
W-614	511,400	12.7
W-712	349,400	8.5
W-714	427,800	10.8
W-904	648,800	13.9
W-415	1,647,700	39.7
W-518	0	0.0
W-903	0	0.0
W-605	430,500	11.2
W-262	0	0.0
W-1004	485,400	11.9
W-1009	60,100	22.0
W-1001	170,200	4.2
Total:	<u><b>7,428,800</b></u>	<u><b>200.6</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>West Perimeter Drainage Channel</b></u>	<u><b>TFB-R002</b></u>	<u><b>3,714,400</b></u>

**Self-Monitoring Report (cont'd)**  
**LLNL Treatment Facility A (TFA)**  
**AREA TFA**

**Arroyo Seco**

**TFG-ASW**

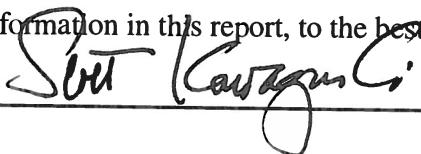
**3,714,400**

**6. Comments:**

Facility down intermittently from 7-13-09 through 7-20-09 due to low air flow.  
W-1009 started on 7-29-09.

**7. I certify that the information in this report, to the best of my knowledge, is true and correct.**

Operator Signature:



Date: 07-31-2009

**Self-Monitoring Report  
LLNL Treatment Facility A (TFA)  
AREA TFA**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): **693**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **08-03-2009**

Influent pH: **7.5**

Effluent pH: **7.5**

Effluent Temperature (°C): **19.3**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-408	1,080,100	26.2
W-109	1,284,900	31.2
W-457	337,000	9.0
W-522	0	0.0
W-614	411,000	10.4
W-712	330,000	7.9
W-714	313,700	7.7
W-904	830,400	20.3
W-415	1,673,800	39.4
W-518	0	0.0
W-903	0	0.0
W-605	366,200	9.2
W-262	0	0.0
W-1004	469,500	11.4
W-1009	896,900	22.2
W-1001	29,800	4.1
Total:	<u><b>8,023,300</b></u>	<u><b>199.0</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>West Perimeter Drainage Channel</b></u>	<u><b>TFB-R002</b></u>	<u><b>4,011,650</b></u>

**Self-Monitoring Report (cont'd)**  
**LLNL Treatment Facility A (TFA)**  
**AREA TFA**

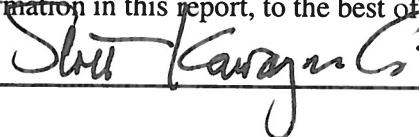
**Arroyo Seco**

**TFG-ASW**    **4,011,650**

**6. Comments:**

Facility down intermittently due to low air flow. W-1001 down on 8-5-09 due to pump failure.

**7. I certify that the information in this report, to the best of my knowledge, is true and correct.**

Operator Signature:  Date: 08-31-2009

**Self-Monitoring Report  
LLNL Treatment Facility A (TFA)  
AREA TFA**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): **698**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **09-01-2009**  
Influent pH: **7.0**  
Effluent pH: **7.5**  
Effluent Temperature ( $^{\circ}$ C): **19.7**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-408	1,154,000	26.4
W-109	1,337,100	31.4
W-457	289,800	7.6
W-522	0	0.0
W-614	392,200	9.9
W-712	308,900	7.9
W-714	300,000	7.8
W-904	297,800	19.7
W-415	1,607,400	42.5
W-518	0	0.0
W-903	0	0.0
W-605	340,500	8.9
W-262	0	0.0
W-1004	445,400	11.4
W-1009	829,200	21.2
W-1001	0	0.0
Total:	<u><b>7,302,300</b></u>	<u><b>194.7</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>West Perimeter Drainage Channel</b></u>	<u><b>TFB-R002</b></u>	<u><b>3,651,150</b></u>

**Self-Monitoring Report (cont'd)  
LLNL Treatment Facility A (TFA)  
AREA TFA**

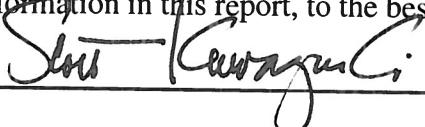
**Arroyo Seco**

**TFG-ASW**    **3,651,150**

**6. Comments:**

Facility went down on 9-2-09 due to low air flow. Restarted on 9-3-09. Facility went down on 9-8-09 due to low air flow. Restarted on 9-9-09. W-904 went down on 9-12-09 due to pump failure.

**7. I certify that the information in this report, to the best of my knowledge, is true and correct.**

Operator Signature:  Date: 09-30-2009

**Self-Monitoring Report  
LLNL Solar Treatment Unit 06 (STU06)  
AREA TFA-E**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 428

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-08-2009  
Influent pH: 7.0  
Effluent pH: 7.5  
Effluent Temperature ( $^{\circ}$ C): 20.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-254	<u>58,830</u>	<u>2.8</u>
Total:	<u>58,830</u>	<u>2.8</u>

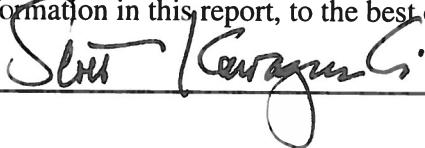
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>58,830</u>

6. Comments:

One of the two extraction well pumps in W-254 failed on 7-21-09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-31-2009

**Self-Monitoring Report**  
**LLNL Solar Treatment Unit 06 (STU06)**  
**AREA TFA-E**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 634

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-04-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 20.2

4. Wellfield Data:

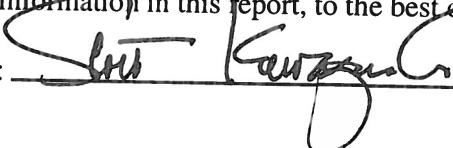
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-254	<u>54,654</u>	<u>1.4</u>
Total:	<u>54,654</u>	<u>1.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>54,654</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 08-31-2009

**Self-Monitoring Report  
LLNL Solar Treatment Unit 06 (STU06)  
AREA TFA-E**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 613

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-02-2009  
Influent pH: 7.0  
Effluent pH: 7.5  
Effluent Temperature (°C): 23

4. Wellfield Data:

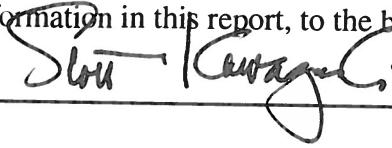
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-254	<u>51,560</u>	<u>1.4</u>
Total:	<u>51,560</u>	<u>1.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>51,560</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 09-30-2009

**Self-Monitoring Report  
LLNL Treatment Facility B (TFB)  
AREA TFB**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 749

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-06-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 22

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	246,300	6.1
W-621	325,500	7.4
W-620	246,000	5.6
W-610	280,100	6.3
W-704	790,200	17.7
W-655	403,700	9.3
W-1423	262,400	5.9
Total:	<u>2,554,200</u>	<u>58.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>2,554,200</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott J. Caragni Date: 07-31-2009

**Land Observation Report date:  
TFB-R002 - West Perimeter Drainage Channel**

1. Reporting Period: Business Month July Year 2009

2. Date compliance sampling performed 07-06-2009

3. Weather Conditions:

Average air temperature (°C):	<u>18.5</u>
6-day total precipitation (in):	<u>0</u>
Average wind speed/direction (mph):	<u>6/ WSW</u>

4. Receiving Data:

Sample	
<u>Location</u>	<u>pH</u> <u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u> <u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Shelley Kavaguer Date: 07-31-2009

**Self-Monitoring Report  
LLNL Treatment Facility B (TFB)  
AREA TFB**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline ) treated ground water was discharged

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 751

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-03-2009  
Influent pH: 7.0  
Effluent pH: 7.5  
Effluent Temperature (°C): 20

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	269,700	6.0
W-621	300,000	6.9
W-620	243,600	5.4
W-610	279,600	6.3
W-704	790,200	17.6
W-655	385,600	8.7
W-1423	262,900	7.9
Total:	<u>2,531,600</u>	<u>58.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>2,531,600</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kewagami Date: 08-31-2009

**Land Observation Report date:  
TFB-R002 - West Perimeter Drainage Channel**

1. Reporting Period: Business Month August Year 2009

2. Date compliance sampling performed 08-03-2009

3. Weather Conditions:

Average air tempertaure (°C):	<u>17.7</u>
6-day total precipitation (in):	<u>0</u>
Average wind speed/direction (mph):	<u>7/ WSW</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Son Kavagnos Date: 08-31-2009

**Self-Monitoring Report  
LLNL Treatment Facility B (TFB)  
AREA TFB**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): 728

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-01-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 20.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	224,200	6.0
W-621	263,100	6.4
W-620	232,700	5.4
W-610	271,200	6.4
W-704	761,500	17.7
W-655	376,700	8.9
W-1423	227,400	5.7
Total:	<u>2,356,800</u>	<u>56.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>2,356,800</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kawaguchi Date: 09-30-2009

**Land Observation Report date:  
TFB-R002 - West Perimeter Drainage Channel**

1. Reporting Period: Business Month September Year 2009

2. Date compliance sampling performed 09-01-2009

3. Weather Conditions:

Average air temperature (°C):	<u>23.5</u>
6-day total precipitation (in):	<u>0</u>
Average wind speed/direction (mph):	<u>4/S</u>

4. Receiving Data:

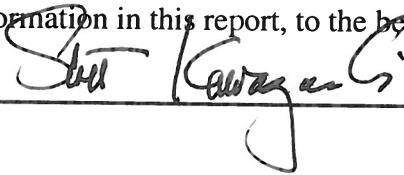
Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 09-30-2009

**Self-Monitoring Report  
LLNL Treatment Facility C (TFC)  
AREA TFC**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 744

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-06-2009

Influent pH: 7.0

Effluent pH: 7.5

Effluent Temperature (°C): 20.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-701	602,931	13.5
W-1015	219,171	7.2
W-1116	72,888	1.5
W-1103	183,155	4.7
W-1102	60,383	3.2
W-1104	1,244,189	27.6
Total:	<u>2,382,717</u>	<u>57.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>2,382,717</u>

6. Comments:

W-1102 down on 7-31-09 due to possible level transducer failure.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kawaguchi Date: 07-31-2009

# Land Observation Report date: TFC-R003 - Arroyo Las Positas

1. Reporting Period: Business Month July Year 2009

2. Date compliance sampling performed 07-06-2009

3. Weather Conditions:

Average air temperature (°C):	<u>18.5</u>
6-day total precipitation (in):	<u>0</u>
Average wind speed/direction (mph):	<u>6/ WSW</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Susan Kawano Date: 07-31-2009

**Self-Monitoring Report  
LLNL Treatment Facility C (TFC)  
AREA TFC**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**    31  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): **579**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **08-03-2009**  
Influent pH: **7.5**  
Effluent pH: **7.5**  
Effluent Temperature (°C): **20.4**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-701	467,282	13.5
W-1015	125,944	6.9
W-1116	66,538	2.0
W-1103	140,415	4.0
W-1102	6,718	3.3
W-1104	967,525	27.5
Total:	<u><b>1,774,422</b></u>	<u><b>57.2</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>1,774,422</b></u>

6. Comments:

Facility secured to change out diffusers on 8-24-09. System would not restart due to calcified discharge pump.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Steve Latorosa* Date: **08-31-2009**

**Land Observation Report date:  
TFC-R003 - Arroyo Las Positas**

1. Reporting Period: Business Month August Year 2009

2. Date compliance sampling performed 08-03-2009

3. Weather Conditions:

Average air tempertaure (°C):	<u>17.7</u>
6-day total precipitation (in):	<u>0</u>
Average wind speed/direction (mph):	<u>7/ WSW</u>

4. Receiving Data:

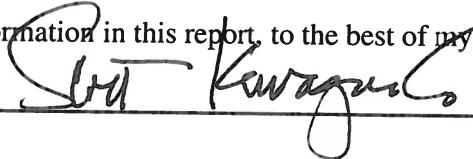
Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: 

Date: 08-31-2009

**Self-Monitoring Report  
LLNL Treatment Facility C (TFC)  
AREA TFC**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>

Total monthly time facility operated (hours): 162

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-22-2009

Influent pH: 7.0

Effluent pH: 7.5

Effluent Temperature (°C): 22.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-701	128,388	13.4
W-1015	8,900	7.4
W-1116	2,176	1.8
W-1103	5,377	4.6
W-1102	0	0.0
W-1104	241,930	27.3
Total:	<u>386,771</u>	<u>54.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>386,771</u>

6. Comments:

Facility down from 8-24-09 to 9-21-09 due to discharge pump/discharge line problem. Restarted at reduced flow (W-701 and W-1104 only running) because discharge pump cannot maintain sufficiently low stripper tank level.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kawaguchi Date: 10-22-2009

# Land Observation Report date: TFC-R003 - Arroyo Las Positas

1. Reporting Period: Business Month September Year 2009

2. Date compliance sampling performed 09-22-2009

3. Weather Conditions:

Average air temperature (°C):	<u>23.4</u>
6-day total precipitation (in):	<u>0</u>
Average wind speed/direction (mph):	<u>34/ SSE</u>

4. Receiving Data:

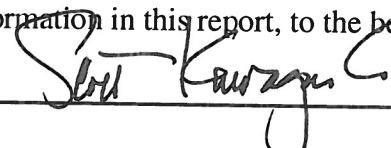
Sample <u>Location</u>	pH	Temperature (C)
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 09-30-2009

**Self-Monitoring Report  
LLNL Mini Treatment Unit 1 (MTU1)  
AREA TFC-E**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 736

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-13-2009

Influent pH: 6.5

Effluent pH: 7.0

Effluent Temperature (°C): 25

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-413	766,001	17.4
W-368	220,541	5.0
Total:	<u>986,542</u>	<u>22.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>986,542</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Alma Vargas Date: 07-31-2009

**Self-Monitoring Report  
LLNL Mini Treatment Unit 1 (MTU1)  
AREA TFC-E**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 741

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-13-2009  
Influent pH: 6.5  
Effluent pH: 7.5  
Effluent Temperature ( $^{\circ}$ C): 21.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-413	761,097	16.9
W-368	217,912	4.8
Total:	<u>979,009</u>	<u>21.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>979,009</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Mark Vandy Date: 08-31-2009

**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 1 (MTU1)**  
**AREA TFC-E**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	<u>28</u>	<u>29</u>	<u>30</u>

Total monthly time facility operated (hours): 45

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>09-29-2009</u>
Influent pH:	<u>6.5</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>19.7</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-413	<u>46,941</u>	<u>17.5</u>
W-368	<u>15,296</u>	<u>5.7</u>
Total:	<u>62,237</u>	<u>23.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>62,237</u>

6. Comments:

Facility discharge pump motor went out on 8-31-09. New pump installed and facility was restarted.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Amrit Vaidya Date: 09-30-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 1 (PTU1)  
AREA TFC-SE**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 754

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-07-2009

Influent pH:

7.5

Effluent pH:

7.5

Effluent Temperature (°C):

21.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1213	<u>444,799</u>	<u>10.0</u>
W-2201	<u>552,504</u>	<u>12.4</u>
Total:	<u><b>997,303</b></u>	<u><b>22.4</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u><b>997,303</b></u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kawaguchi Date: 07-31-2009

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 1 (PTU1)**  
**AREA TFC-SE**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline ) treated ground water was discharged

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
              **16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 755

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-05-2009  
Influent pH: 7.0  
Effluent pH: 7.5  
Effluent Temperature (°C): 21.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1213	439,445	10.0
W-2201	552,656	12.4
Total:	<u>992,101</u>	<u>22.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>992,101</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kavazanjian Date: 08-31-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 1 (PTU1)  
AREA TFC-SE**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): 729

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-01-2009  
Influent pH: 7.0  
Effluent pH: 7.5  
Effluent Temperature ( $^{\circ}$ C): 21.5

4. Wellfield Data:

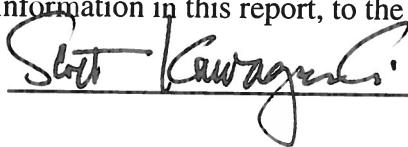
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1213	431,688	10.0
W-2201	535,544	12.3
Total:	<u>967,232</u>	<u>22.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>967,232</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 09-30-2009

**Self-Monitoring Report  
LLNL Treatment Facility D (TFD)  
AREA TFD**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
16 17 18 19 **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 610

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-13-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 22.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-906	0	0.0
W-907-2	0	0.0
W-351	0	0.0
W-653	0	0.0
W-1206	377,600	17.0
W-1208	326,100	23.7
W-2011	0	0.0
W-2101	0	0.0
W-2102	0	0.0
Total:	<u>703,700</u>	<u>40.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>703,700</u>

6. Comments:

Extraction well field start-up. W-1206 operated at various flow rates starting on 6-30-09 and secured on 7-15-09. W-1208 operated at various flow rates starting on 7-20-09 and secured on 7-30-09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

**Self-Monitoring Report (cont'd)**  
**LLNL Treatment Facility D (TFD)**  
**AREA TFD**

Operator Signature: Son Kawaguchi Date: 07-31-2009

**Self-Monitoring Report  
LLNL Treatment Facility D (TFD)  
AREA TFD**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline ) treated ground water was discharged

August      01    02    03    **04**    **05**    **06**    **07**    **08**    **09**    **10**    **11**    **12**    **13**    **14**    **15**  
**16**    **17**    **18**    **19**    **20**    **21**    22    23    **24**    **25**    **26**    **27**    **28**    **29**    **30**    **31**

Total monthly time facility operated (hours): **583**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **08-05-2009**  
Influent pH: **7.5**  
Effluent pH: **8.0**  
Effluent Temperature (°C): **24.1**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-906	236,900	2.9
W-907-2	0	0.0
W-351	13,200	1.4
W-653	100	0.0
W-1206	68,900	7.3
W-1208	131,800	13.1
W-2011	0	0.0
W-2101	100	0.0
W-2102	0	0.0
Total:	<u><b>451,000</b></u>	<u><b>24.7</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>451,000</b></u>

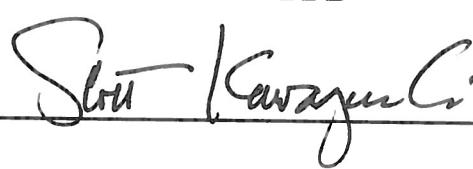
6. Comments:

Extraction well field start-up(W-906) started on 8-4-09. Secured on 8-21-09 for recovery. Extraction well field start-up(W-351, W-906, W-1206, W-1208) started on 8-24-09. W-906 down on 8-30-09 due to possible transducer failure.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

**Self-Monitoring Report (cont'd)**  
**LLNL Treatment Facility D (TFD)**  
**AREA TFD**

Operator Signature:

 Date: 09-02-2009

**Self-Monitoring Report  
LLNL Treatment Facility D (TFD)  
AREA TFD**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): 622

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-08-2009

Influent pH: 7.0

Effluent pH: 7.5

Effluent Temperature (°C): 21.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-906	68,500	2.9
W-907-2	0	0.0
W-351	49,200	1.3
W-653	5,800	0.1
W-1206	217,600	6.0
W-1208	496,700	13.5
W-2011	0	0.0
W-2101	15,900	0.3
W-2102	0	0.0
<hr/>	<hr/>	<hr/>
Total:	<u>853,700</u>	<u>24.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>853,700</u>

6. Comments:

Started W-653 and W-2101 on 9-3-09. Started W-906 on 9-9-09. System secured on 9-17-09 for well field recovery. Started system on 9-21-09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kawaguchi Date: 10-22-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 8 (PTU8)  
AREA TFD-E**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** 18 19 **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): **634**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **07-08-2009**  
Influent pH: **7.0**  
Effluent pH: **7.5**  
Effluent Temperature (°C): **21.3**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1253	0	0.0
W-1255	0	0.0
W-1550	90,500	2.4
W-1307	240,500	6.3
W-1301	35,900	1.2
W-1303	0	0.0
W-1306	11,200	0.3
W-1404	60,600	1.4
W-2006	0	0.0
W-2203	31,700	0.9
Total:	<u><b>470,400</b></u>	<u><b>12.5</b></u>

5. Discharge Information:

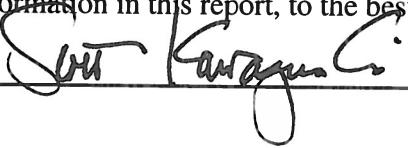
<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>470,400</b></u>

6. Comments:

Facility down 7-8-09 due to Snap I/O fault. Restarted on 7-9-09. Facility down on 7-16-09 due to Snap I/O fault. Restarted on 7-17-09. Facility down on 7-17-09 due to Snap I/O fault. Restarted on 7-20-09. Hours of operation estimated from logbook entries due to suspect hour meter readings.

**Self-Monitoring Report (cont'd)**  
**LLNL Portable Treatment Unit 8 (PTU8)**  
**AREA TFD-E**

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-31-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 8 (PTU8)  
AREA TFD-E**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline ) treated ground water was discharged

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): **586**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **08-04-2009**  
Influent pH: **7.0**  
Effluent pH: **7.5**  
Effluent Temperature (°C): **20.7**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1253	0	0.0
W-1255	0	0.0
W-1550	83,500	2.3
W-1307	225,600	6.3
W-1301	27,400	0.9
W-1303	0	0.0
W-1306	9,400	0.2
W-1404	27,200	0.8
W-2006	0	0.0
W-2203	13,300	0.9
Total:	<u><b>386,400</b></u>	<u><b>11.4</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>386,400</b></u>

6. Comments:

Hours calculated from logbook. Facility down intermittently due to Snap I/O fault. Secured W-2203 on 8-17-09 due to leaking flange.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

**Self-Monitoring Report (cont'd)**  
**LLNL Portable Treatment Unit 8 (PTU8)**  
**AREA TFD-E**

Operator Signature:

Steve Kawaguchi

Date: 08-31-2009

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 8 (PTU8)**  
**AREA TFD-E**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): **547**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **09-04-2009**  
Influent pH: **7.5**  
Effluent pH: **7.5**  
Effluent Temperature ( $^{\circ}$ C): **24.3**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1253	0	0.0
W-1255	0	0.0
W-1550	73,100	2.4
W-1307	200,800	6.3
W-1301	30,100	0.9
W-1303	0	0.0
W-1306	7,600	0.3
W-1404	21,200	1.0
W-2006	0	0.0
W-2203	0	0.0
Total:	<u><b>332,800</b></u>	<u><b>10.9</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u><b>Arroyo Las Positas</b></u>	<u><b>TFC-R003</b></u>	<u><b>332,800</b></u>

6. Comments:

Facility down intermittently due to Snap I/O fault. Facility hours estimated from facility logbook.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

**Self-Monitoring Report (cont'd)  
LLNL Portable Treatment Unit 8 (PTU8)  
AREA TFD-E**

Operator Signature: Stan Kewley Date: 10-09-2009

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 10 (PTU10)**  
**AREA TFD-HPD**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
															31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature ( $^{\circ}$ C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1254	0	0.0
W-1653	0	0.0
W-1657	0	0.0
W-1551	0	0.0
W-1654	0	0.0
W-1656	0	0.0
W-1650	0	0.0
W-1652	0	0.0
W-1552	0	0.0
W-1651	0	0.0
W-1655	0	0.0
<hr/>		
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 10-11-07 for a bioremediation pilot test at this location. It has not been restarted due to a FY 2008 funding reduction.

Facilities will be restarted in a prioritized order, pending available staff and resources.

**Self-Monitoring Report (cont'd)**  
**LLNL Portable Treatment Unit 10 (PTU10)**  
**AREA TFD-HPD**

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Almut Vowig Date: 07-31-2009

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 10 (PTU10)**  
**AREA TFD-HPD**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
															31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature ( $^{\circ}$ C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1254	0	0.0
W-1653	0	0.0
W-1657	0	0.0
W-1654	0	0.0
W-1655	0	0.0
W-1551	0	0.0
W-1650	0	0.0
W-1652	0	0.0
W-1552	0	0.0
W-1651	0	0.0
W-1656	0	0.0
<hr/>		
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 10-11-07 for a bioremediation pilot test at this location. It has not been restarted due to a FY 2008 funding reduction. Facilities will be restarted in a prioritized order, pending available staff and resources.

**Self-Monitoring Report (cont'd)**  
**LLNL Portable Treatment Unit 10 (PTU10)**  
**AREA TFD-HPD**

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Amit Vang Date: 09-08-2009

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 10 (PTU10)**  
**AREA TFD-HPD**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September 01 02 03 **04** 05 06 07 **08** **09** **10** **11** 12 13 **14** **15**  
**16** **17** **18** **19** **20** **21** 22 23 **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours):

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-24-2009

Influent pH: 7.5

Effluent pH: 7.6

Effluent Temperature (°C): 26.4

4. Wellfield Data:

<u>Source</u>	Monthly <u>Volume(gal)</u>	Instantaneous <u>Flow Rate(gpm)</u>
W-1254	<b><u>224,787</u></b>	<b><u>10.0</u></b>
W-1653	<b><u>0</u></b>	<b><u>0.0</u></b>
W-1657	<b><u>0</u></b>	<b><u>0.0</u></b>
W-1654	<b><u>0</u></b>	<b><u>0.0</u></b>
W-1655	<b><u>0</u></b>	<b><u>0.0</u></b>
W-1551	<b><u>0</u></b>	<b><u>0.0</u></b>
W-1650	<b><u>0</u></b>	<b><u>0.0</u></b>
W-1652	<b><u>0</u></b>	<b><u>0.0</u></b>
W-1552	<b><u>0</u></b>	<b><u>0.0</u></b>
W-1651	<b><u>0</u></b>	<b><u>0.0</u></b>
W-1656	<b><u>0</u></b>	<b><u>0.0</u></b>
Total:	<b><u>224,787</u></b>	<b><u>10.0</u></b>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<b><u>Arroyo Las Positas</u></b>	<b><u>TFC-R003</u></b>	<b><u>224,787</u></b>

6. Comments:

The facility was started on 9/4/2009 with W-1254 at a flowrate of 10.0 gpm. The Extraction Well Field Start- Up Plan started at this time.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

**Self-Monitoring Report (cont'd)**  
**LLNL Portable Treatment Unit 10 (PTU10)**  
**AREA TFD-HPD**

Operator Signature:

 Date: 10-14-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 2 (PTU2)  
AREA TFD-S**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 725

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-22-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 22.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1503	798,232	18.4
W-1510	168,061	6.3
W-1504	369,726	8.5
Total:	<u>1,336,019</u>	<u>33.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,336,019</u>

6. Comments:

W-1510 shut down on 7/23/09 due to unknown cause, well under evaluation.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Paul Allen Date: 08-04-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 2 (PTU2)  
AREA TFD-S**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 751

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-13-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 22.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1503	834,664	18.7
W-1510	0	0.0
W-1504	386,173	8.6
Total:	<u>1,220,837</u>	<u>27.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,220,837</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Karl Clegg Date: 09-01-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 2 (PTU2)  
AREA TFD-S**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): 720

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-09-2009

Influent pH: 7.5

Effluent pH: 7.5

Effluent Temperature (°C): 23.4

4. Wellfield Data:

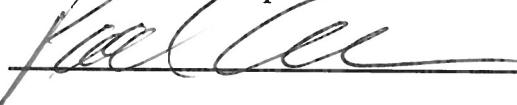
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1503	<b>797,080</b>	<b>18.6</b>
W-1510	<b>0</b>	<b>0.0</b>
W-1504	<b>368,557</b>	<b>8.6</b>
Total:	<b><u>1,165,637</u></b>	<b><u>27.2</u></b>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<b><u>Arroyo Las Positas</u></b>	<b><u>TFC-R003</u></b>	<b><u>1,165,637</u></b>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-09-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 11 (PTU11)  
AREA TFD-SE**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline ) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 752

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-07-2009

Influent pH: 7.0

Effluent pH: 7.5

Effluent Temperature (°C): 21.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-314	0	0.0
W-1403	37,807	6.6
W-1308	124,442	2.8
W-1904	0	0.0
W-2005	69,923	1.4
SIP-ETC-201	0	0.0
Total:	<u>232,172</u>	<u>10.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>232,172</u>

6. Comments:

W-1403 started on 7-27-09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Shawn Keween Date: 10-28-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 11 (PTU11)  
AREA TFD-SE**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline ) treated ground water was discharged

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 731

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-04-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 20.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-314	0	0.0
W-1403	292,461	6.7
W-1308	118,576	2.7
W-1904	0	0.0
W-2005	67,334	1.5
SIP-ETC-201	0	0.0
Total:	<u>478,371</u>	<u>10.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>478,371</u>

6. Comments:

Facility down on 8-9-09 due to low flow fault. Facility restarted on 8-10-09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Scott Lawrence* Date: 08-31-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 11 (PTU11)  
AREA TFD-SE**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** 22 23 **24** **25** 26 27 **28** **29** **30**

Total monthly time facility operated (hours): 556

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-04-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 23.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-314	0	0.0
W-1403	222,052	6.6
W-1308	90,758	2.8
W-1904	0	0.0
W-2005	47,778	1.4
SIP-ETC-201	0	0.0
Total:	<u>360,588</u>	<u>10.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>360,588</u>

6. Comments:

Facility down on 9-21-09 due to low flow and I/O fault. Restarted on 9-24-09.  
Facility down on 9-25-09 due to low fault. Restarted on 9-28-09. Facility also down for shorter intermittent periods due to low flow faults.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Stan Kavagnis* Date: 09-30-2009

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 12 (PTU12)**  
**AREA TFD-SS**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 748

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-22-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 22.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1523	286,984	6.4
W-1603	0	0.0
W-1602	200,097	4.1
W-1601	47,286	1.0
Total:	<u>534,367</u>	<u>11.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>534,367</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 08-05-2009

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 12 (PTU12)**  
**AREA TFD-SS**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 680

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-13-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 22.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1523	334,908	8.3
W-1603	0	0.0
W-1602	202,492	5.0
W-1601	55,889	1.4
Total:	<u>593,289</u>	<u>14.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>593,289</u>

6. Comments:

System secure from 8/1/09 to 8/3/09 for electronic evaluation of PLC.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Karl Cee Date: 09-03-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 12 (PTU12)  
AREA TFD-SS**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): 728

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-10-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 23.4

4. Wellfield Data:

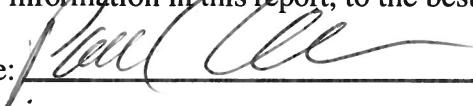
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1523	336,632	7.8
W-1603	0	0.0
W-1602	216,867	5.0
W-1601	56,796	1.3
Total:	<u>610,295</u>	<u>14.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>610,295</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-01-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 6 (PTU6)  
AREA TFD-W**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 578

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-22-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 22.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1216	235,490	6.6
W-1215	0	0.0
W-1902	413,944	12.7
Total:	<u>649,434</u>	<u>19.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>649,434</u>

6. Comments:

System secure from 7/4/09 to 7/6/09 and 7/10/09 to 7/13/09 due to erroneous leak alarm and electronic repairs.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 08-05-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 6 (PTU6)  
AREA TFD-W**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 750

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-13-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 21.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1216	<u>299,207</u>	<u>6.6</u>
W-1215	<u>0</u>	<u>0.0</u>
W-1902	<u>521,572</u>	<u>11.7</u>
Total:	<u><b>820,779</b></u>	<u><b>18.3</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u><b>820,779</b></u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 09-02-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 6 (PTU6)  
AREA TFD-W**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** 18 19 20 21 22 23 **24** 25 26 27 28 **29** **30**

Total monthly time facility operated (hours): 428

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-09-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 26

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1216	176,257	6.8
W-1215	0	0.0
W-1902	282,523	11.3
Total:	<u>458,780</u>	<u>18.1</u>

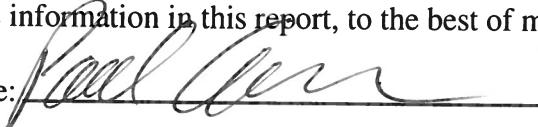
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>458,780</u>

6. Comments:

System secure from 9/17/09 to 9/24/09 for air stripper/blower repairs and maintenance. System secure from 9/24/09 to 9/29/09 for electronic repairs and maintenance. System operated on 9/24,29,30/09 day operations only for system checkout and evaluation.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-22-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 11 (VES11)**  
**AREA VTFD-ETCS**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline ) treatment facility operated

July	01	02	03	04	05	06	07	08	<u>09</u>	10	11	12	<u>13</u>	<u>14</u>	<u>15</u>	
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1904	683	8.9	-1.8	68	1
W-ETC-2003	399,176	16.3	-3.83	68	417
W-ETC-2004B	135,785	4.5	-7.22	68	417
W-ETC-2004A	136,226	6.1	-6.47	68	417
SIP-ETC-201	685	5.7	-9.3	68	1
Total:	<u>672,555</u>	<u>41.4</u>			

4. Comments:

As part of the REVAL, facility re-activation process, intermittent operation of SVE wells occurred during reporting month.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Ihonar Date: 08-05-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 11 (VES11)**  
**AREA VTFD-ETCS**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline ) treatment facility operated

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
              **16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

3. Wellfield Data:

<u>Source</u>	Monthly <u>Volume(cu. ft)</u>	Instantaneous <u>Flow Rate(scfm)</u>	P(in. Hg)	T(°F)	Hours <u>of Op.</u>
W-1904	0	0.0	0	0	694
W-ETC-2003	593,102	15.1	-1.21	80	694
W-ETC-2004B	172,557	5.2	-4.89	80	694
W-ETC-2004A	195,304	5.7	-4.7	80	694
SIP-ETC-201	0	0.0	0	0	694
Total:	<u>960,963</u>	<u>26.0</u>			

4. Comments:

Facility experienced several shutdowns to update software strategies and investigate operation of facility and well field totalizers. Month end volumes and hours of operation entered on this report have been estimated due to loss of data during testing and verification of upgrades.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 09-14-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 11 (VES11)**  
**AREA VTFD-ETCS**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treatment facility operated

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1904	0	0.0	0	0	0
W-ETC-2004A	244,574	5.7	-4.74	92	692
W-ETC-2003	585,795	15.1	-1.17	92	692
W-ETC-2004B	242,344	5.1	-4.99	92	692
SIP-ETC-201	0	0.0	0	0	0
Total:	<u>1,072,713</u>	<u>25.8</u>			

4. Comments:

Facility experienced several shutdowns during reporting month due to high condensate tank level, To mitigate this problem, the skid mounted transfer pump was removed and replaced with an LMI pump for condensate removal.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 10-01-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 07 (VES07)**  
**AREA VTFD-HPD**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline ) treatment facility operated

July	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
															31

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1651	0	0.0	0	0	0
W-1653	0	0.0	0	0	0
W-1657	0	0.0	0	0	0
W-1654	0	0.0	0	0	0
W-1652	0	0.0	0	0	0
W-1552	0	0.0	0	0	0
W-1655	0	0.0	0	0	0
W-1656	0	0.0	0	0	0
W-1650	0	0.0	0	0	0
W-HPA-002A	0	0.0	0	0	0
W-HPA-002B	0	0.0	0	0	0
Total:	<hr/>	<b><u>0</u></b>	<b><u>0.0</u></b>		

4. Comments:

This treatment facility was shut down on 10-11-07 for a bioremediation pilot test at this location. It has not been restarted due to a FY 2008 funding reduction. Facilities will be restarted in a prioritized order, pending available staff and resources.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Mark Vining Date: 07-31-2009

**Self-Monitoring Report  
LLNL Vapor Extraction System 07 (VES07)  
AREA VTFD-HPD**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treatment facility operated

August	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

3. Wellfield Data:

<u>Source</u>	Monthly <u>Volume(cu. ft)</u>	Instantaneous <u>Flow Rate(scfm)</u>	Hours <u>P(in. Hg)</u>	<u>T(°F)</u>	<u>of Op.</u>
W-1651	0	0.0	0	0	0
W-1653	0	0.0	0	0	0
W-1657	0	0.0	0	0	0
W-1654	0	0.0	0	0	0
W-1652	0	0.0	0	0	0
W-1552	0	0.0	0	0	0
W-1655	0	0.0	0	0	0
W-1656	0	0.0	0	0	0
W-1650	0	0.0	0	0	0
W-HPA-002A	0	0.0	0	0	0
W-HPA-002B	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Comments:

This treatment facility was shut down on 10-11-07 for a bioremediation pilot test at this location. It has not been restarted due to a FY 2008 funding reduction. Facilities will be restarted in a prioritized order, pending available staff and resources.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Albert Vank Date: 09-08-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 07 (VES07)**  
**AREA VTFD-HPD**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treatment facility operated

September 01 02 **03** 04 05 06 07 **08** **09** **10** **11** 12 13 **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

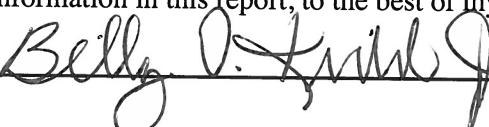
3. Wellfield Data:

<u>Source</u>	Monthly Volume(cu. ft)	Instantaneous Flow Rate(scfm)	P(in. Hg)	T(°F)	Hours of Op.
W-1651	0	0.0	0	0	0
W-1653	0	0.0	0	0	0
W-1657	0	0.0	0	0	0
W-1654	0	0.0	0	0	0
W-1652	0	0.0	0	0	0
W-1552	0	0.0	0	0	0
W-1655	0	0.0	0	0	0
W-1656	0	0.0	0	0	0
W-1650	0	0.0	0	0	0
W-HPA-002A	312,895	21.1	-22.9	82	312
W-HPA-002B	0	0.0	0	0	0
Total:	<u>312,895</u>	<u>21.1</u>			

4. Comments:

The facility was started with W-HPA-002A at 21.09 scfm on 9/3/09. The Extraction Well Field Start-Up Plan was started at this time.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-14-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 13 (VES13)**  
**AREA VTFD-HS**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treatment facility operated

July	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
															31

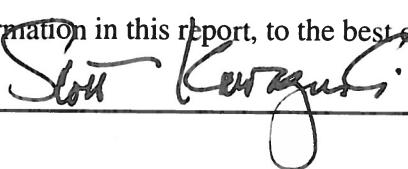
3. Wellfield Data:

<u>Source</u>	Monthly <u>Volume(cu. ft)</u>	Instantaneous <u>Flow Rate(scfm)</u>	P(in. Hg)	T(°F)	Hours <u>of Op.</u>
W-653	0	0.0	0	0	0
W-2011	0	0.0	0	0	0
W-2101	0	0.0	0	0	0
W-2102	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Comments:

This treatment facility was shut down on 6-7-07 due to a failed blower motor. It has not been restarted due to a FY 2008 funding reduction. Facilities will be restarted in a prioritized order, pending available staff and resources.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 08-03-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 13 (VES13)**  
**AREA VTFD-HS**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treatment facility operated

August	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

3. Wellfield Data:

<u>Source</u>	Monthly Volume(cu. ft)	Instantaneous Flow Rate(scfm)	P(in. Hg)	T(°F)	Hours of Op.
W-653	0	0.0	0	0	0
W-2011	0	0.0	0	0	0
W-2101	0	0.0	0	0	0
W-2102	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Comments:

This treatment facility was shut down on 6-7-07 due to a failed blower motor. It has not been restarted due to a FY 2008 funding reduction. Facilities will be restarted in a prioritized order, pending available staff and resources.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Laverne Date: 09-03-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 13 (VES13)**  
**AREA VTFD-HS**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treatment facility operated

September 01 02 **03** **04** 05 06 07 **08** **09** **10** **11** 12 13 14 **15**  
**16** **17** 18 19 20 **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-653	<b>5,988</b>	0.3	-25	66	320
W-2011	0	0.0	0	0	0
W-2101	<b>1,843</b>	0.1	-25	66	320
W-2102	0	0.0	0	0	0
Total:	<b>7,831</b>	<b>0.4</b>			

4. Comments:

Facility operated in business hours mode from 9-3-09 through 9-8-09. Facility began 24 hour operations on 9-9-09. Facility secured on 9-11-09 for well field recovery. System started on 9-15-09. Facility secured on 9-17-09 to allow contractor power tie-in. System started on 9-21-09.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Stan Kowagan Date: 09-30-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 3 (PTU3)  
AREA TFE-E**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	
	16	17	18	19	20	21	22	23	24	25	26	27	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>

Total monthly time facility operated (hours): 26

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>07-28-2009</u>
Influent pH:	<u>7.2</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>26.1</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-566	<u>7,652</u>	<u>5.1</u>
W-1109	<u>3,170</u>	<u>2.0</u>
W-1903	<u>0</u>	<u>0.0</u>
W-1909	<u>0</u>	<u>0.0</u>
W-2305	<u>0</u>	<u>0.0</u>
Total:	<u>10,822</u>	<u>7.1</u>

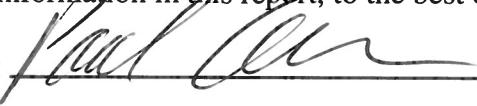
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>10,822</u>

6. Comments:

System operated under testing and verification, day operations only, from 7/28/09 to 7/31/09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 08-06-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 3 (PTU3)  
AREA TFE-E**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 450

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-12-2009  
Influent pH: 7.0  
Effluent pH: 7.5  
Effluent Temperature ( $^{\circ}$ C): 22.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-566	<u>97,252</u>	<u>5.0</u>
W-1109	<u>17,063</u>	<u>0.0</u>
W-1903	<u>0</u>	<u>0.0</u>
W-1909	<u>0</u>	<u>0.0</u>
W-2305	<u>0</u>	<u>0.0</u>
Total:	<u>114,315</u>	<u>5.0</u>

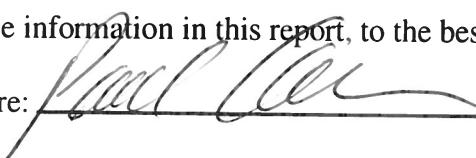
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>114,315</u>

6. Comments:

System secure 8/1/09 to 8/3/09 for testing and verification day only operations.  
System secure 8/7/09 to 8/11/09 and 8/19/09 to 8/24/09 to rest wells per TFE-E EWFSUP.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 09-04-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 3 (PTU3)  
AREA TFE-E**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September **01** **02** **03** **04** 05 06 07 **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): 626

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-02-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 22.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-566	226,591	0.0
W-1109	90,967	1.9
W-1903	0	0.0
W-1909	0	0.0
W-2305	0	0.0
Total:	<u>317,558</u>	<u>1.9</u>

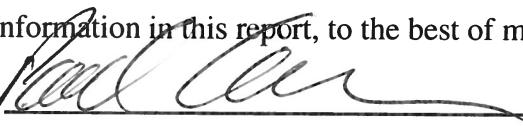
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>317,558</u>

6. Comments:

System secure from 9/4/09 to 9/8/09 to allow wells to rest per TFE-E EWFSUP.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-01-2009

**Self-Monitoring Report  
LLNL GAC Treatment Unit 07 (GTU07)  
AREA TFE-HS**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
															31

Total monthly time facility operated (hours): 168

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature ( $^{\circ}$ C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2012	<u>67,623</u>	<u>0.0</u>
W-2105	<u>984</u>	<u>0.0</u>
Total:	<u>68,607</u>	<u>0.0</u>

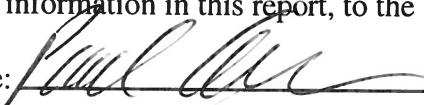
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>68,607</u>

6. Comments:

System secured on 7/7/09 to change carbon. During conditioning of the new carbon, on 7/7/09, a flow rate and volume discrepancy was noted. System remained secure for the remainder of the month for flow meter evaluation and repairs. Compliance sampling not performed because facility was secure. Flow rate(s) on 7/7/09, prior to shut-down,: W-2105 0.0 GPM, W-2012 6.8 GPM.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 08-06-2009

**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 07 (GTU07)**  
**AREA TFE-HS**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 508

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-10-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 26.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2012	<u>110,405</u>	<u>3.1</u>
W-2105	<u>0</u>	<u>0.0</u>
Total:	<u>110,405</u>	<u>3.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>110,405</u>

6. Comments:

System secure 8/1/09 to 8/4/09 for flow meter repairs. System secure 8/4/09 to 8/6/09 for W-2012 overload repairs. System secure 8/27/09 through 8/31/09 for W-2012 overload repairs.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Paul Clee Date: 09-01-2009

**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 07 (GTU07)**  
**AREA TFE-HS**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 598

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-09-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 24.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2012	<u>112,216</u>	<u>3.1</u>
W-2105	<u>0</u>	<u>0.0</u>
Total:	<u>112,216</u>	<u>3.1</u>

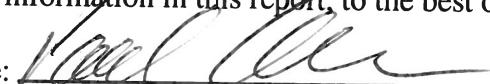
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>112,216</u>

6. Comments:

System down from 8/27/09 to 9/2/09 and 9/19/09 to 9/21/09 due to W-2012 pump controller overload trip.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-01-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 9 (PTU9)  
AREA TFE-NW**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 750

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-20-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 23.4

4. Wellfield Data:

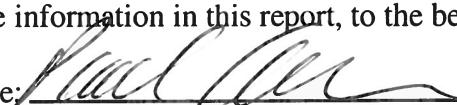
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	<u>748,645</u>	<u>16.9</u>
W-1409	<u>0</u>	<u>0.0</u>
Total:	<u>748,645</u>	<u>16.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>748,645</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 08-05-2009

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 9 (PTU9)**  
**AREA TFE-NW**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
              **16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 754

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-11-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 23.5

4. Wellfield Data:

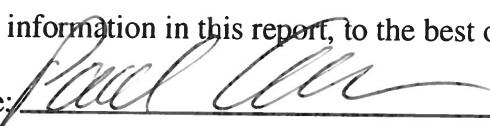
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	761,420	16.9
W-1409	0	0.0
Total:	<u>761,420</u>	<u>16.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>761,420</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 09-01-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 9 (PTU9)  
AREA TFE-NW**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): 731

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-10-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 23.5

4. Wellfield Data:

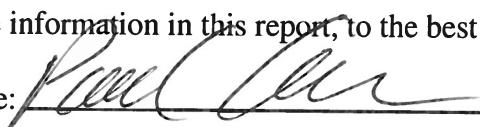
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	<u>713,864</u>	<u>16.6</u>
W-1409	<u>0</u>	<u>0.0</u>
Total:	<u>713,864</u>	<u>16.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>713,864</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-01-2009

**Self-Monitoring Report  
LLNL Mini Treatment Unit 04 (MTU04)  
AREA TFE-SE**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 736

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-20-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 22.8

4. Wellfield Data:

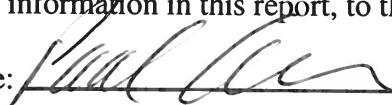
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-359	<u>444,463</u>	<u>10.0</u>
Total:	<u>444,463</u>	<u>10.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>444,463</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 08-05-2009

**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 04 (MTU04)**  
**AREA TFE-SE**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 744

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-12-2009  
Influent pH: 7.0  
Effluent pH: 7.5  
Effluent Temperature (°C): 23.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-359	<u>446,812</u>	<u>10.0</u>
Total:	<u>446,812</u>	<u>10.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>446,812</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Paul Lee* Date: 09-01-2009

**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 04 (MTU04)**  
**AREA TFE-SE**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline ) treated ground water was discharged

September 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 678

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-03-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 23.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-359</b>	<b>396,881</b>	<b>9.9</b>
Total:	<u>396,881</u>	<u>9.9</u>

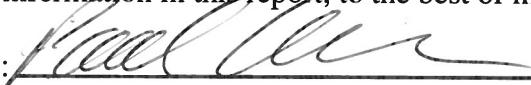
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<b>Arroyo Las Positas</b>	<b>TFC-R003</b>	<b>396,881</b>

6. Comments:

System secure from 9/28/09 to 9/30/09 to repair communications link.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-01-2009

**Self-Monitoring Report  
LLNL Mini Treatment Unit 03 (MTU03)  
AREA TFE-SW**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 740

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-01-2009  
Influent pH: 7.0  
Effluent pH: 7.5  
Effluent Temperature (°C): 19.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1520	57	0.0
W-1518	0	0.0
W-1522	75,149	1.7
Total:	<u>75,206</u>	<u>1.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>75,206</u>

6. Comments:

W-1520 was started for sampling purposes only.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Brian R. Mitchell Date: 08-03-2009

**Self-Monitoring Report  
LLNL Mini Treatment Unit 03 (MTU03)  
AREA TFE-SW**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline ) treated ground water was discharged

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 741

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-04-2009  
Influent pH: 7.0  
Effluent pH: 7.5  
Effluent Temperature (°C): 21.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1520	0	0.0
W-1518	0	0.0
W-1522	73,848	1.7
Total:	<u>73,848</u>	<u>1.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>73,848</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: B. Mitchell Date: 08-31-2009

**Self-Monitoring Report  
LLNL Mini Treatment Unit 03 (MTU03)  
AREA TFE-SW**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): 718

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-01-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature ( $^{\circ}$ C): 23

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1520</b>	<b>0</b>	<b>0.0</b>
<b>W-1518</b>	<b>65,039</b>	<b>1.7</b>
<b>W-1522</b>	<b>24,294</b>	<b>0.0</b>
<b>Total:</b>	<b><u>89,333</u></b>	<b><u>1.7</u></b>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<b><u>Arroyo Las Positas</u></b>	<b><u>TFC-R003</u></b>	<b><u>89,333</u></b>

6. Comments:

On 9/10 W-1522 was secured per Hydrology Team due to elevated levels of Tritium from B-419 area.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Brian Mitchell Date: 09-30-2009

**Self-Monitoring Report  
LLNL Mini Treatment Unit 05 (MTU05)  
AREA TFE-W**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 740

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-06-2009  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 20.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-305	393,610	8.8
W-292	265,849	6.0
Total:	<u>659,459</u>	<u>14.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>659,459</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Brian Mitchell Date: 08-03-2009

**Self-Monitoring Report  
LLNL Mini Treatment Unit 05 (MTU05)  
AREA TFE-W**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 741

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-05-2009  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 21.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-305	393,908	8.8
W-292	265,872	6.0
Total:	<u>659,780</u>	<u>14.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>659,780</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: B. Mitchell Date: 08-31-2009

**Self-Monitoring Report  
LLNL Mini Treatment Unit 05 (MTU05)  
AREA TFE-W**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): 717

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-01-2009  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature ( $^{\circ}$ C): 20.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-305	381,541	8.9
W-292	256,995	6.0
Total:	<u>638,536</u>	<u>14.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
Arroyo Las Positas	TFC-R003	<u>638,536</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Brian Mitchell Date: 09-30-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 16 (VES16)**  
**AREA VTFE-ELM**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treatment facility operated

July	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
															31

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1903	0	0.0	0	0	0
W-1909	0	0.0	0	0	0
W-2305	0	0.0	0	0	0
W-543-003	0	0.0	0	0	0
W-543-001	0	0.0	0	0	0
W-543-1908	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Comments:

This treatment facility was shut down on 2/06/08. Due to a FY 2008 funding reduction, facilities will be restarted in a prioritized order, pending available staff and resources.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 08-04-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 16 (VES16)**  
**AREA VTFE-ELM**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treatment facility operated

August	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>
															31

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1903	0	0.0	0	0	210
W-1909	0	0.0	0	0	210
W-2305	0	0.0	0	0	210
W-543-003	190,631	15.0	-.76	73	210
W-543-001	0	0.0	0	0	210
W-543-1908	0	0.0	0	0	210
Total:	<u>190,631</u>	<u>15.0</u>			

4. Comments:

8/21/09-Start VES 16 day only operations for system testing and verification. After an evaluation of system performance, status was changed to 24 hour operation. 8/25/09-Facility was shutdown to inspect electrical connections to motor and evaluate condensate collection operation. 8/26/09-Facility was shutdown for Opto system upgrade, and restarted 8/27/09.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thorne Date: 09-10-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 16 (VES16)**  
**AREA VTFE-ELM**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treatment facility operated

September 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1903	0	0.0	0	0	0
W-1909	0	0.0	0	0	0
W-2305	0	0.0	0	0	0
W-543-003	<u>655,948</u>	<u>15.0</u>	<u>-.83</u>	<u>57</u>	<u>719</u>
W-543-001	0	0.0	0	0	0
W-543-1908	0	0.0	0	0	0
Total:	<u>655,948</u>	<u>15.0</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 09-30-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 12 (VES12)**  
**AREA VTFE-HS**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treatment facility operated

July	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
															31

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-ETS-2010B	0	0.0	0	0	0
W-ETS-2010A	0	0.0	0	0	0
W-ETS-2009	0	0.0	0	0	0
W-ETS-2008A	0	0.0	0	0	0
W-ETS-2008B	0	0.0	0	0	0
W-2105	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Comments:

TFE-HS did not operate in the month of July 2009. Facility failed on 3/10/08 due to a catastrophic motor failure of the liquid ring vacuum pump. DOE and the regulatory agencies were notified of this action. Due to a FY 2008 funding reduction, facilities will be restarted in a prioritized order, pending available staff and resources.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 08-04-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 12 (VES12)**  
**AREA VTFE-HS**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treatment facility operated

August      01  02  03  04  05  06  07  08  09  10  11  12  13  14  15  
              16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-ETS-2010B	24,510	15.0	-.28	78	8
W-ETS-2010A	117,080	10.0	-1.09	78	191
W-ETS-2009	31,943	10.0	-.64	78	36
W-ETS-2008A	123,529	10.0	-1.49	78	188
W-ETS-2008B	112,037	10.0	-8.55	78	192
W-2105	0	0.0	0	0	0
Total:	<u>409,099</u>	<u>55.0</u>			

4. Comments:

Facility was started 8/13/09 to evaluate performance of facility and wellfield instrumentation. Facility began 24 hour operation 8/21/09. Due to erratic operation and "drifting" of wellfield totalizers, facility and SVE well hours entered on report are an estimation of actual monthly hours of operation.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 09-11-2009

**Self-Monitoring Report  
LLNL Vapor Extraction System 12 (VES12)  
AREA VTFE-HS**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treatment facility operated

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-ETS-2010B	0	0.0	0	0	0
W-ETS-2010A	447,600	10.3	-.48	56	726
W-ETS-2009	0	0.0	0	0	0
W-ETS-2008A	463,973	10.6	-1.51	56	726
W-ETS-2008B	401,933	9.8	-10.33	56	726
W-2105	0	0.0	0	0	0
Total:	<u>1,313,506</u>	<u>30.7</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 10-01-2009

**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 01 (GTU01)**  
**AREA TFG-1**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 735

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-23-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 23

4. Wellfield Data:

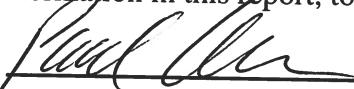
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1111	<u>391,921</u>	<u>8.8</u>
Total:	<u>391,921</u>	<u>8.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>391,921</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 08-05-2009

# Land Observation Report date: TFG-ASW - Arroyo Seco

1. Reporting Period: Business Month July Year 2009

2. Date compliance sampling performed 07-23-2009

3. Weather Conditions:

Average air temperature (°C):	<u>21.1</u>
6-day total precipitation (in):	<u>0</u>
Average wind speed/direction (mph):	<u>6/ SW</u>

4. Receiving Data:

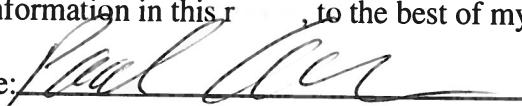
Sample <u>Location</u>	pH	Temperature (C)
<u>Receiving Water</u>	<u>7.5</u>	<u>23.3</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>N/A</u>

6. Comments:

- I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 08-05-2009

**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 01 (GTU01)**  
**AREA TFG-1**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 747

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-17-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature ( $^{\circ}$ C): 22.8

4. Wellfield Data:

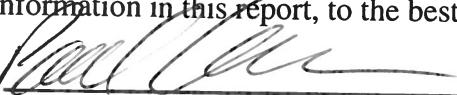
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1111	<u>396,434</u>	<u>8.8</u>
Total:	<u>396,434</u>	<u>8.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>396,434</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 09-01-2009

**Land Observation Report date:  
TFG-ASW - Arroyo Seco**

1. Reporting Period: Business Month August Year 2009

2. Date compliance sampling performed 08-17-2009

3. Weather Conditions:

Average air temperature (°C):	<u>21.2</u>
6-day total precipitation (in):	<u>0</u>
Average wind speed/direction (mph):	<u>6/ SSW</u>

4. Receiving Data:

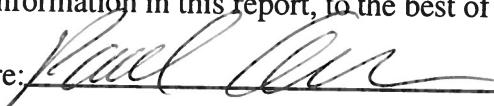
Sample <u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>N/A</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 09-01-2009

**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 01 (GTU01)**  
**AREA TFG-1**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours):

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-08-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 21.5

4. Wellfield Data:

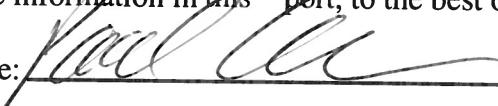
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1111	<u>377,922</u>	<u>8.7</u>
Total:	<u>377,922</u>	<u>8.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>377,922</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 09-30-2009

# Land Observation Report date: TFG-ASW - Arroyo Seco

1. Reporting Period: Business Month September Year 2009

2. Date compliance sampling performed 09-08-2009

3. Weather Conditions:

Average air tempertaure (°C):	<u>19.5</u>
6-day total precipitation (in):	<u>0</u>
Average wind speed/direction (mph):	<u>6/ SW</u>

4. Receiving Data:

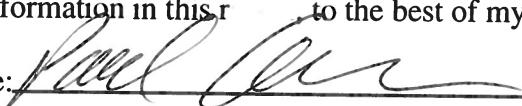
Sample <u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>N/A</u>

6. Comments:

7. I certify that the information in this report to the best of my knowledge, is true and correct.

Operator Signature:  Date: 09-30-2009

**Self-Monitoring Report  
LLNL Mini Treatment Unit 02 (MTU02)  
AREA TFG-N**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
16	17	18	19	20	21	22	<u>23</u>	<u>24</u>	25	26	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u> <u>31</u>

Total monthly time facility operated (hours):

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>07-23-2009</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>23.4</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1807	<u>21,860</u>	<u>4.0</u>
W-1806	<u>11,538</u>	<u>2.1</u>
Total:	<u>33,398</u>	<u>6.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>33,398</u>

6. Comments:

System operated under testing and verification, day operations only, from 7/23/09 to 7/31/09.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 08-05-2009

**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 02 (MTU02)**  
**AREA TFG-N**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours):

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-12-2009  
Influent pH: 7.0  
Effluent pH: 7.0  
Effluent Temperature (°C): 20.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1807	43,420	0.0
W-1806	23,507	1.1
Total:	<u>66,927</u>	<u>1.1</u>

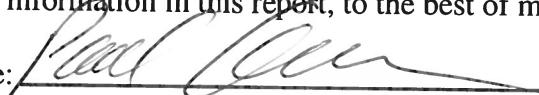
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>66,927</u>

6. Comments:

System secure 8/1/09 to 8/3/09 for testing and verification day only operations.  
System secure 8/7/09 to 8/11/09 and 8/19/09 to 8/24/09 to rest wells per TFG-N  
EWFSUP.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 09-04-2009

**Self-Monitoring Report**  
**LLNL Mini Treatment Unit 02 (MTU02)**  
**AREA TFG-N**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 615

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-02-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 21

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1807	191,988	10.1
W-1806	68,634	0.0
Total:	<u>260,622</u>	<u>10.1</u>

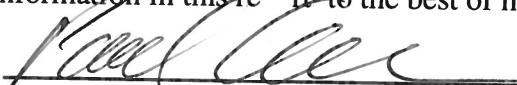
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>260,622</u>

6. Comments:

System secured from 9/4/09 to 9/8/09 to rest wells per TFG-N EWFSUP.

7. I certify that the information in this report to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-01-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 5 (PTU5)  
AREA TF406**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 746

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-01-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature ( $^{\circ}$ C): 25.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1309	243	4.7
W-1310	715,723	16.0
GSW-445	0	0.0
Total:	<u>715,966</u>	<u>20.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>715,966</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 08-05-2009

**Self-Monitoring Report  
LLNL Portable Treatment Unit 5 (PTU5)  
AREA TF406**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 757

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-12-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 25.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1309	0	0.0
W-1310	724,295	16.2
GSW-445	0	0.0
Total:	<u>724,295</u>	<u>16.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>724,295</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Paul Coker Date: 09-01-2009

**Self-Monitoring Report**  
**LLNL Portable Treatment Unit 5 (PTU5)**  
**AREA TF406**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): 725

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-08-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature ( $^{\circ}$ C): 23.7

4. Wellfield Data:

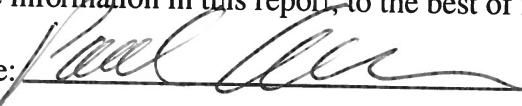
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1309	0	0.0
W-1310	689,711	16.0
GSW-445	0	0.0
Total:	<u>689,711</u>	<u>16.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>689,711</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 09-30-2009

**Self-Monitoring Report  
LLNL GAC Treatment Unit 03 (GTU03)  
AREA TF406-NW**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** 07 08 09 10 11 12 13 14 15  
16 17 18 19 **20** **21** **22** 23 24 25 26 **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 273

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-21-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 23.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1801</b>	<b>121,983</b>	<b>8.7</b>
Total:	<u>121,983</u>	<u>8.7</u>

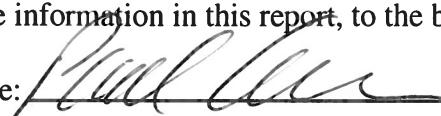
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>121,983</u>

6. Comments:

System secure from 7/6/09 to 7/20/09 due to power outage and carbon change.  
System secure from 7/22/09 to 7/27/09 due to electronic trouble shooting and repairs.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 08-05-2009

**Self-Monitoring Report  
LLNL GAC Treatment Unit 03 (GTU03)  
AREA TF406-NW**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August      **01**  02  03  04  05  06  07  08  09  10  11  12  13  14  15  
             16  17  18  **19**  **20**  21  22  23  **24**  **25**  **26**  **27**  **28**  **29**  **30**  **31**

Total monthly time facility operated (hours): 217

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-20-2009  
Influent pH: 7.5  
Effluent pH: 7.5  
Effluent Temperature (°C): 21.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1801	<u>85,863</u>	<u>6.8</u>
Total:	<u>85,863</u>	<u>6.8</u>

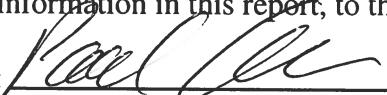
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>85,863</u>

6. Comments:

System secure from 8/1/09 to 8/10/09 for leak repair. System secure from 8/10/09 to 8/19/09 due to facility power turned off during building demolishing activities.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 09-01-2009

**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 03 (GTU03)**  
**AREA TF406-NW**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): 640

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-03-2009

Influent pH:

7.5

Effluent pH:

7.5

Effluent Temperature (°C):

21.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1801	223,385	7.0
Total:	<u>223,385</u>	<u>7.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>223,385</u>

6. Comments:

System secure from 9/26/09 to 9/29/09 due to power disconnected to facility.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:

Date: 10-01-2009

**Self-Monitoring Report**  
**LLNL Solar Treatment Unit 09 (STU09)**  
**AREA TF518-N**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
															31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature ( $^{\circ}$ C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1410</b>	<b>0</b>	<b>0.0</b>
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. Due to a FY 2008 funding reduction, facilities will be restarted in a prioritized order, pending available staff and resources.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Stan Kawamura Date: 08-03-2009

**Self-Monitoring Report  
LLNL Solar Treatment Unit 09 (STU09)  
AREA TF518-N**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
															31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1410	0	0.0
Total:	<hr/> <u>0</u>	<hr/> <u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
Arroyo Las Positas	TFC-R003	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. Due to a FY 2008 funding reduction, facilities will be restarted in a prioritized order, pending available staff and resources.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kuwahara Date: 09-03-2009

**Self-Monitoring Report  
LLNL Solar Treatment Unit 09 (STU09)  
AREA TF518-N**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature ( $^{\circ}$ C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1410</b>	<b>0</b>	<b>0.0</b>
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. Due to a FY 2008 funding reduction, facilities will be restarted in a prioritized order, pending available staff and resources.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Georges C. Date: 10-01-2009

**Self-Monitoring Report**  
**LLNL Treatment Facility 518-HDTANK (TF518-HDTANK)**  
**AREA TF518-PZ**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
															31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature ( $^{\circ}$ C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1615</b>	<b>0</b>	<b>0.0</b>
<b>W-518-1913</b>	<b>0</b>	<b>0.0</b>
<b>W-518-1915</b>	<b>0</b>	<b>0.0</b>
<b>W-518-1914</b>	<b>0</b>	<b>0.0</b>
<b>SVB-518-201</b>	<b>0</b>	<b>0.0</b>
<b>SVB-518-204</b>	<b>0</b>	<b>0.0</b>
<hr/>		
<b>Total:</b>	<b>0</b>	<b>0.0</b>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<b><u>Arroyo Las Positas</u></b>	<b><u>TFC-R003</u></b>	<b><u>0</u></b>

6. Comments:

This treatment facility was shut down on 2-27-08 due to a FY 2008 funding reduction. Facilities will be restarted in a prioritized order, pending available staff and resources.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 08-04-2009

**Self-Monitoring Report**  
**LLNL Treatment Facility 518-HDTANK (TF518-HDTANK)**  
**AREA TF518-PZ**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature ( $^{\circ}$ C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1615</b>	<b>0</b>	<b>0.0</b>
<b>W-518-1913</b>	<b>0</b>	<b>0.0</b>
<b>W-518-1915</b>	<b>0</b>	<b>0.0</b>
<b>W-518-1914</b>	<b>0</b>	<b>0.0</b>
<b>SVB-518-201</b>	<b>0</b>	<b>0.0</b>
<b>SVB-518-204</b>	<b>0</b>	<b>0.0</b>
<hr/>		
<b>Total:</b>	<b>0</b>	<b>0.0</b>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<b><u>Arroyo Las Positas</u></b>	<b><u>TFC-R003</u></b>	<b><u>0</u></b>

6. Comments:

This treatment facility was shut down on 2-27-08 due to a FY 2008 funding reduction. Facilities will be restarted in a prioritized order, pending available staff and resources.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 09-04-2009

**Self-Monitoring Report**  
**LLNL Treatment Facility 518-HDTANK (TF518-HDTANK)**  
**AREA TF518-PZ**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 **17** **18** 19 20 21 22 **23** 24 25 26 27 **28** 29 30

Total monthly time facility operated (hours): 3

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1615	66	0.0
W-518-1913	0	0.0
W-518-1915	38	0.0
W-518-1914	0	0.0
SVB-518-201	0	0.0
SVB-518-204	0	0.0
Total:	<u>104</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>104</u>

6. Comments:

intermittent operation of the Groundwater extraction process initiated 9/17, 9/18, 9/23, and 9/28/09 to test and verify pneumatic pump operation.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 10-12-2009

**Self-Monitoring Report**  
**LLNL Catalytic Reductive Dehalogenation 1 (CRD1)**  
**AREA TF5475-1**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
															31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature ( $^{\circ}$ C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1302-2	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-1 injection</u>	<u>W-1302-1</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 7/27/07. Due to a FY 2008 funding reduction, facilities will be restarted in a prioritized order, pending available staff and resources.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Paul Cen Date: 08-05-2009

**Self-Monitoring Report**  
**LLNL Catalytic Reductive Dehalogenation 1 (CRD1)**  
**AREA TF5475-1**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
															31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature ( $^{\circ}$ C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1302-2</b>	<b>0</b>	<b>0.0</b>
Total:	<u>0</u>	<u>0.0</u>

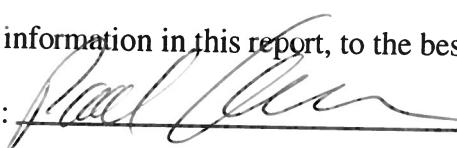
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<b><u>CRD-1 injection</u></b>	<b><u>W-1302-1</u></b>	<b><u>0</u></b>

6. Comments:

This treatment facility was shut down on 7/27/07. Due to a FY 2008 funding reduction, facilities will be restarted in a prioritized order, pending available staff and resources.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 09-01-2009

**Self-Monitoring Report**  
**LLNL Catalytic Reductive Dehalogenation 1 (CRD1)**  
**AREA TF5475-1**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1302-2</b>	<b>0</b>	<b>0.0</b>
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<b>CRD-1 injection</b>	<b>W-1302-1</b>	<b>0</b>

6. Comments:

This treatment facility was shut down on 7/27/07. Due to a FY 2008 funding reduction, facilities will be restarted in a prioritized order, pending available staff and resources.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Mark Clegg Date: 10-01-2009

**Self-Monitoring Report  
LLNL GAC Treatment Unit 09 (GTU09)  
AREA TF5475-2**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 753

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 07-13-2009

Influent pH: 6.5

Effluent pH: 7.0

Effluent Temperature (°C): 22.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1108	<u>206,321</u>	<u>4.6</u>
W-1415	<u>0</u>	<u>0.0</u>
Total:	<u><b>206,321</b></u>	<u><b>4.6</b></u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>206,321</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Mark Vining* Date: 07-31-2009

**Self-Monitoring Report  
LLNL GAC Treatment Unit 09 (GTU09)  
AREA TF5475-2**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 565

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 08-13-2009  
Influent pH: 6.5  
Effluent pH: 7.5  
Effluent Temperature ( $^{\circ}$ C): 21.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1108	151,268	4.5
W-1415	0	0.0
Total:	<u>151,268</u>	<u>4.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>151,268</u>

6. Comments:

Facility was down 8-4/8-10 for carbon canister change out and maintenance.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Albert Vassay Date: 08-31-2009

**Self-Monitoring Report**  
**LLNL GAC Treatment Unit 09 (GTU09)**  
**AREA TF5475-2**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): 730

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-02-2009

Influent pH:

6.5

Effluent pH:

7.5

Effluent Temperature (°C):

21.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1108	<u>194,503</u>	<u>4.5</u>
W-1415	<u>0</u>	<u>0.0</u>
Total:	<u>194,503</u>	<u>4.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>194,503</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Grant Vining Date: 09-30-2009

**Self-Monitoring Report**  
**LLNL Catalytic Reductive Dehalogenation 2 (CRD2)**  
**AREA TF5475-3**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

July	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
															31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1608</b>	<b>0</b>	<b>0.0</b>
<b>W-1605</b>	<b>0</b>	<b>0.0</b>
<b>W-1604</b>	<b>0</b>	<b>0.0</b>
<b>W-1609</b>	<b>0</b>	<b>0.0</b>
<hr/> Total:	<hr/> <b>0</b>	<hr/> <b>0.0</b>

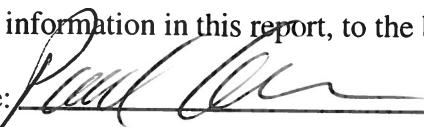
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<b><u>CRD-2 injection</u></b>	<b><u>W-1610</u></b>	<b><u>0</u></b>

6. Comments:

This treatment facility was shut down on 8/31/07. Due to a FY 2008 funding reduction, facilities will be restarted in a prioritized order, pending available staff and resources.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 08-05-2009

**Self-Monitoring Report**  
**LLNL Catalytic Reductive Dehalogenation 2 (CRD2)**  
**AREA TF5475-3**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

August	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature ( $^{\circ}$ C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
<b>W-1608</b>	0	0.0
<b>W-1605</b>	0	0.0
<b>W-1604</b>	0	0.0
<b>W-1609</b>	0	0.0
 Total:	<hr/>	<hr/>
	<b>0</b>	<b>0.0</b>

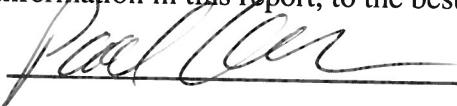
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<b><u>CRD-2 injection</u></b>	<b><u>W-1610</u></b>	<b><u>0</u></b>

6. Comments:

This treatment facility was shut down on 8/31/07. Due to a FY 2008 funding reduction, facilities will be restarted in a prioritized order, pending available staff and resources.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 09-01-2009

**Self-Monitoring Report**  
**LLNL Catalytic Reductive Dehalogenation 2 (CRD2)**  
**AREA TF5475-3**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treated ground water was discharged

September	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature ( $^{\circ}$ C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1608	0	0.0
W-1605	0	0.0
W-1604	0	0.0
W-1609	0	0.0
<hr/> Total:	<hr/> 0	<hr/> <u>0.0</u>

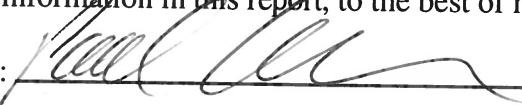
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-2 injection</u>	<u>W-1610</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 8/31/07. Due to a FY 2008 funding reduction, facilities will be restarted in a prioritized order, pending available staff and resources.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-01-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 08 (VES08)**  
**AREA VTF406-HS**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treatment facility operated

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-514-2007A	229,860	5.2	-5.73	77	754
W-217	1,052,080	23.1	-2.59	77	754
W-514-2007B	446,288	9.9	-2.95	77	754
Total:	<u>1,728,228</u>	<u>38.2</u>			

4. Comments:

Quarterly vapor samples collected at SVE wells 7/22/09.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 08-03-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 08 (VES08)**  
**AREA VTF406-HS**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treatment facility operated

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
              **16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-217	1,051,086	23.2	-2.42	82.4	754
W-514-2007B	443,859	9.9	-2.83	82.4	754
W-514-2007A	259,037	5.6	-5.51	82.4	754
Total:	<u>1,753,982</u>	<u>38.7</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 09-03-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 08 (VES08)**  
**AREA VTF406-HS**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treatment facility operated

September 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15  
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-217	997,341	22.4	-2.68	84.2	730
W-514-2007B	431,690	10.0	-2.75	84.2	730
W-514-2007A	252,607	5.9	-5.42	84.2	730
Total:	<u>1,681,638</u>	<u>38.3</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Dan Horner Date: 09-30-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 14 (VES14)**  
**AREA VTF511**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treatment facility operated

July      **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
             **16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-274	0	0.0	0	0	0
W-2208A	0	0.0	0	0	0
W-2207A	0	0.0	0	0	0
W-2207B	247,263	5.8	-3.8	66	740
W-1517	0	0.0	0	0	0
W-2208B	247,779	5.8	-6.1	66	740
W-2204	0	0.0	0	0	0
W-2206	0	0.0	0	0	0
W-2205	0	0.0	0	0	0
Total:	<u><b>495,042</b></u>	<u><b>11.6</b></u>			

4. Comments:

Facility and well totalizers were reset following the recording of June month end totals. Quarterly vapor samples collected at SVE wells 7/22/09.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 08-06-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 14 (VES14)**  
**AREA VTF511**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline ) treatment facility operated

August      **01** **02** **03** **04** **05** **06** **07** **08** **09** 10 11 12 **13** **14** **15**  
              16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-274	0	0.0	0	0	0
W-2208A	0	0.0	0	0	0
W-2207A	0	0.0	0	0	0
W-2207B	207,602	5.7	-3.6	80	637
W-1517	0	0.0	0	0	0
W-2208B	208,248	5.7	-6.2	80	637
W-2204	0	0.0	0	0	0
W-2206	0	0.0	0	0	0
W-2205	0	0.0	0	0	0
Total:	<u>415,850</u>	<u>11.4</u>			

4. Comments:

Facility was found shutdown 8/10/09 due to failure of Opto system hardware.  
Facility was restarted 8/13/09. Facility shutdown 8/15/09 and was restarted  
8/17/09. Cause of shutdown unknown.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thompson Date: 09-10-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 14 (VES14)**  
**AREA VTF511**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treatment facility operated

September **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**  
**16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-274	0	0.0	0	0	0
W-2206	0	0.0	0	0	0
W-2207A	0	0.0	0	0	0
W-2204	0	0.0	0	0	0
W-2208B	188,154	5.6	-6.2	78	563
W-1517	0	0.0	0	0	0
W-2207B	187,816	5.6	-3.8	78	563
W-2208A	0	0.0	0	0	0
W-2205	0	0.0	0	0	0
Total:	<u>375,970</u>	<u>11.1</u>			

4. Comments:

Facility was offline several days during reporting month due to failure of the facility OPTO system. Monthly volumes and hours of operation entered on this report are estimates based on values recorded prior to loss of data.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 10-12-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 19 (VES19)**  
**AREA VTF518-PZ**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treatment facility operated

July	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
															31

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	0	0.0	0	0	0
W-518-1913	0	0.0	0	0	0
W-518-1915	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<hr/>	<b><u>0</u></b>	<b><u>0.0</u></b>		

4. Comments:

This treatment facility was shut down on 2/27/08. Due to a FY 2008 funding reduction, facilities will be restarted in a prioritized order, pending available staff and resources.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 08-04-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 19 (VES19)**  
**AREA VTF518-PZ**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treatment facility operated

August	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
															31

3. Wellfield Data:

<u>Source</u>	Monthly <u>Volume(cu. ft)</u>	Instantaneous <u>Flow Rate(scfm)</u>	P(in. Hg)	T( $^{\circ}$ F)	Hours of Op.
<b>W-1615</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-518-1913</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-518-1915</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-518-1914</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>SVB-518-201</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>SVB-518-204</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Total:	<b>0</b>	<b>0.0</b>			

4. Comments:

This treatment facility was shut down on 2/27/08. Due to a FY 2008 funding reduction, facilities will be restarted in a prioritized order, pending available staff and resources.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 09-22-2009

**Self-Monitoring Report  
LLNL Vapor Extraction System 19 (VES19)  
AREA VTF518-PZ**

1. Reporting Period: Business Month September Week: 1 Year 2009

2. Dates (in **bold** and underline) treatment facility operated

September 01 02 03 04 05 06 07 08 09 10 11 12 13 14 **15**  
**16** **17** **18**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
<b>W-1615</b>	<b>8,203</b>	<b>3.1</b>	<b>-15</b>	<b>62</b>	<b>44</b>
<b>W-518-1913</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-518-1915</b>	<b>529</b>	<b>0.2</b>	<b>-25</b>	<b>62</b>	<b>44</b>
<b>W-518-1914</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>SVB-518-201</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>SVB-518-204</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Total:	<u><b>8,732</b></u>	<u><b>3.3</b></u>			

4. Comments:

VTF-518-PZ (VES 19) SVE restarted 9/15/09 extracting from W-1615 and W-518-1915. Facility began 24 hr. operations 9/16/19. Facility was shutdown 9/18/09 @ 13:40 hrs.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 10-20-2009

**Self-Monitoring Report  
LLNL Vapor Extraction System 19 (VES19)  
AREA VTF518-PZ**

1. Reporting Period: Business Month September Week: 2 Year 2009

2. Dates (in **bold** and underline) treatment facility operated

September 19 20 **21** **22** **23** **24** **25**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>Hours</u>		
			<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>of Op.</u>
<b>W-1615</b>	<b>19,354</b>	<b>3.2</b>	<b>-16</b>	<b>72</b>	<b>101</b>
<b>W-518-1913</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>101</b>
<b>W-518-1915</b>	<b>1,814</b>	<b>0.3</b>	<b>-24.2</b>	<b>72</b>	<b>101</b>
<b>W-518-1914</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>101</b>
<b>SVB-518-201</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>101</b>
<b>SVB-518-204</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>101</b>
Total:	<u><b>21,168</b></u>	<u><b>3.5</b></u>			

4. Comments:

Facility was shutdown 9/18 and restarted 9/21/09 @ 10:20 hrs. Facility was shutdown 9/23 @ 13:15 hrs to test groundwater pump operation and to initiate facility well field start-up. Facility was restarted 9/23 @ 13:47 hrs. Tedlar bag samples collected from W-1615 and W-518-1915 9/24/09.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 10-20-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 01 (VES01)**  
**AREA VTF5475**

1. Reporting Period: Business Month July Year 2009

2. Dates (in **bold** and underline) treatment facility operated

<b>0</b>	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
															31

3. Wellfield Data:

<u>Source</u>	Monthly <u>Volume(cu. ft)</u>	Instantaneous <u>Flow Rate(scfm)</u>	Hours <u>P(in. Hg)</u>	<u>T(°F)</u>	<u>of Op.</u>
<b>W-ETS-507</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-1608</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-1605</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2211</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2302</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2303</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>W-2212</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>SVI-ETS-504</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Total:	<b>0</b>	<b>0.0</b>			

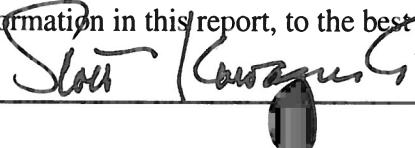
4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<b><u>VTF5475 Vapor Injection Well</u></b>	<b><u>SVI-ETS-505</u></b>	<b><u>0</u></b>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY 2008 funding reduction. Facilities will be restarted in a prioritized order, pending available staff and resources.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 08-03-2009

**Self-Monitoring Report  
LLNL Vapor Extraction System 01 (VES01)  
AREA VTF5475**

1. Reporting Period: Business Month August Year 2009

2. Dates (in **bold** and underline) treatment facility operated

August	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

3. Wellfield Data:

<u>Source</u>	Monthly <u>Volume(cu. ft)</u>	Instantaneous <u>Flow Rate(scfm)</u>	P(in. Hg)	T(°F)	Hours <u>of Op.</u>
W-ETS-507	0	0.0	0	0	0
W-1608	0	0.0	0	0	0
W-1605	0	0.0	0	0	0
W-2211	0	0.0	0	0	0
W-2302	0	0.0	0	0	0
W-2303	0	0.0	0	0	0
W-2212	0	0.0	0	0	0
SVI-ETS-504	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

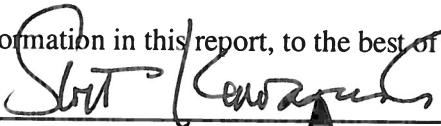
4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>VTF5475 Vapor Injection Well</u>	<u>SVI-ETS-505</u>	<u>0</u>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY 2008 funding reduction. Facilities will be restarted in a prioritized order, pending available staff and resources.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 09-03-2009

**Self-Monitoring Report**  
**LLNL Vapor Extraction System 01 (VES01)**  
**AREA VTF5475**

1. Reporting Period: Business Month September Year 2009

2. Dates (in **bold** and underline) treatment facility operated

September	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-ETS-507	0	0.0	0	0	0
W-1608	0	0.0	0	0	0
W-1605	0	0.0	0	0	0
W-2211	0	0.0	0	0	0
W-2302	0	0.0	0	0	0
W-2303	0	0.0	0	0	0
W-2212	0	0.0	0	0	0
SVI-ETS-504	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

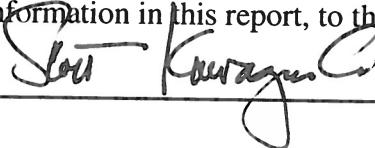
4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>VTF5475 Vapor Injection Well</u>	<u>SVI-ETS-505</u>	<u>0</u>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY 2008 funding reduction. Facilities will be restarted in a prioritized order, pending available staff and resources.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-01-2009

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## **Attachment C**

### **Lake Haussmann**

## **Attachment C**

### **Lake Haussmann Third Quarter 2009 Monitoring Program Summary**

This attachment summarizes the third quarter 2009 LLNL Environmental Protection Department discharge data for Lake Haussmann. Lake Haussmann is an artificial water body that has a 37 acre-ft capacity. It is located in the central portion of the Livermore Site (Fig. C-1) and receives storm water runoff and treated ground water discharges.

Samples are collected from water discharged from Lake Haussmann and analyzed as outlined in Jackson (2002). The discharge samples are used to determine compliance with discharge limits in the *Record of Decision* (DOE, 1992), and the subsequent *Explanation of Significant Differences for Metals Discharge Limits* (Berg et al., 1997).

Dry season (June, July, August, September) discharges are sampled at each manual release or monthly during periods of continual release. Wet season (October through May) discharge samples are collected at the first release of the wet season and one other discharge in conjunction with a storm water monitoring event. Analytic results of discharge samples collected at location CDBX are compared with the LLNL Arroyo Las Positas outfall sample results collected at location WPDC (Fig. C-1). The results for samples collected at locations CDBX and WPDC are presented in Table C-1. The July sampling event occurred on August 5, 2009 as a result of water sampling staff availability. All PCBs were below detection limits. No metals exceed discharge limits. The pH values at CDBX exceeded the desired range of 6.5 to 8.5. The pH has averaged 8.6 since 1998 at the CDBX sampling location and is typically elevated during summer due to increased photosynthesis. Aquatic bioassay tests showed no toxicity.

Discharge from Lake Haussmann remained continuous during the third quarter. The Lake Haussmann upper weir gate was maintained at the lowered position during the entire third quarter so that releases occurred continuously to minimize changes in surface water level and allow for a more natural ecosystem.

### **References**

U.S. Department of Energy, *Record of Decision for the Lawrence Livermore National Laboratory, Livermore Site*, Lawrence Livermore National Laboratory, Livermore, CA, UCRL-AR-109105, (1992).

Berg, L.L., E.N. Folsom, M.D. Dresen, R.W. Bainer, and A.L. Lamarre, Eds., *Explanation of Significant Differences for Metals Discharge Limits at the Lawrence Livermore National Laboratory, Livermore Site*, Lawrence Livermore National Laboratory, Livermore, CA, UCRL-AR-125927 (1997).

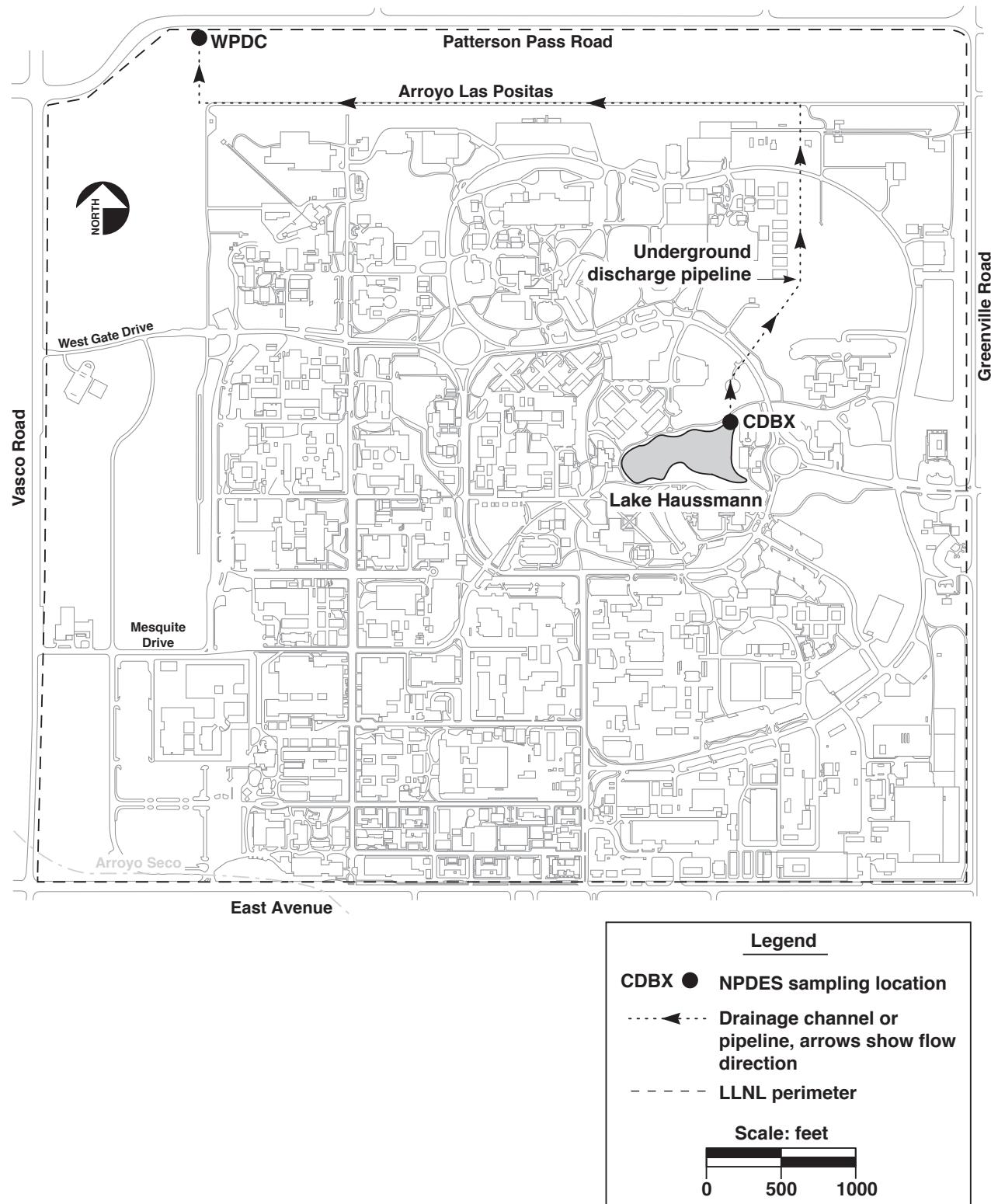
Jackson, C.S., *Drainage Retention Basin Monitoring Plan Change*, Letter to Ms. Naomi Feger, San Francisco Bay RWQCB, Lawrence Livermore National Laboratory, Livermore, CA, WGMG02:175:CSJ:RW:kh, (December 6, 2002).

Table C-1 LLNL Lake Haussmann release monitoring data for points CDBX and WPDC, July through September 2009.

			CDBX 8/5	CDBX 8/26	CDBX 9/29	WPDC 8/5	WPDC 8/26	WPDC 9/29	Discharge Limits 1-Apr through 30-Nov
<b>Physical</b>									
pH	Units	EPA-150.1	9.54	9.29	9.6	8.28	8.17	8.41	not <6.5 nor >8.5
Total suspended solids (TSS)	mg/L	EPA-160.2	2.4	1.2	<1.2	28	6.8	7.2	na
<b>Polychlorinated biphenyls</b>									
PCB 1016	ug/L	E8082A	< 0.5	a	a	b	b	b	na
PCB 1221	ug/L	E8082A	< 0.5	< 0.5	< 0.5	b	b	b	na
PCB 1232	ug/L	E8082A	< 0.5	< 0.5	< 0.5	b	b	b	na
PCB 1242	ug/L	E8082A	< 0.5	< 0.5	< 0.5	b	b	b	na
PCB 1248	ug/L	E8082A	< 0.5	< 0.5	< 0.5	b	b	b	na
PCB 1254	ug/L	E8082A	< 0.5	< 0.5	< 0.5	b	b	b	na
PCB 1260	ug/L	E8082A	< 0.5	< 0.5	< 0.5	b	b	b	na
<b>Metals - Total</b>									
Aluminum	mg/L	EPA-200.7	< 0.05	< 0.05	< 0.05	0.25	0.2	0.19	na
Antimony	mg/L	EPA-200.8	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.006
Arsenic	mg/L	EPA-200.8	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.05
Barium	mg/L	EPA-200.7	0.093	0.094	0.093	0.12	0.12	0.12	na
Beryllium	mg/L	EPA-210.2	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.004
Boron	mg/L	EPA-200.7	1.8	2.	1.9	1.2	1.3	1.3	na
Cadmium	mg/L	EPA-200.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.005
Chromium	mg/L	EPA-200.8	< 0.003	< 0.003	< 0.003	0.011	0.007	0.0098	0.05
Cobalt	mg/L	EPA-200.7	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	na
Copper	mg/L	EPA-200.8	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	1.3
Hexavalent Chromium	mg/L	EPA-7196	0.0015	0.0024	0.0014	0.0072	0.0053	0.0074	na
Iron	mg/L	EPA-200.7	< 0.05	< 0.05	< 0.05	0.36	0.28	0.25	na
Lead	mg/L	EPA-200.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.015
Manganese	mg/L	EPA-200.8	0.0016	0.0012	0.0014	0.011	0.006	0.0057	0.5
Mercury	mg/L	EPA-245.1	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.002
Molybdenum	mg/L	EPA-200.8	0.0029	0.0028	0.003	0.0023	0.0023	0.0024	0.05
Nickel	mg/L	EPA-200.8	< 0.002	< 0.002	< 0.002	0.0025	0.0025	< 0.002	0.1
Selenium	mg/L	EPA-200.8	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.05
Silver	mg/L	EPA-200.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.1
Thallium	mg/L	EPA-200.8	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002
Vanadium	mg/L	EPA-200.7	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	na
Zinc	mg/L	EPA-200.7	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	na
<b>Toxicity</b>									
Aq. Bioassay, Survival	Percent	Title 22	100.	100.	100.	100.	100.	100.	na

a) All analysis results for these analytes are below reporting limits.

b) Sampling for these analytes not required at this location.



ERD-S3R-08-0041

**Figure C-1. Location of Lake Haussmann showing discharge sampling locations.**

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## **Attachment D**

### **Figures**

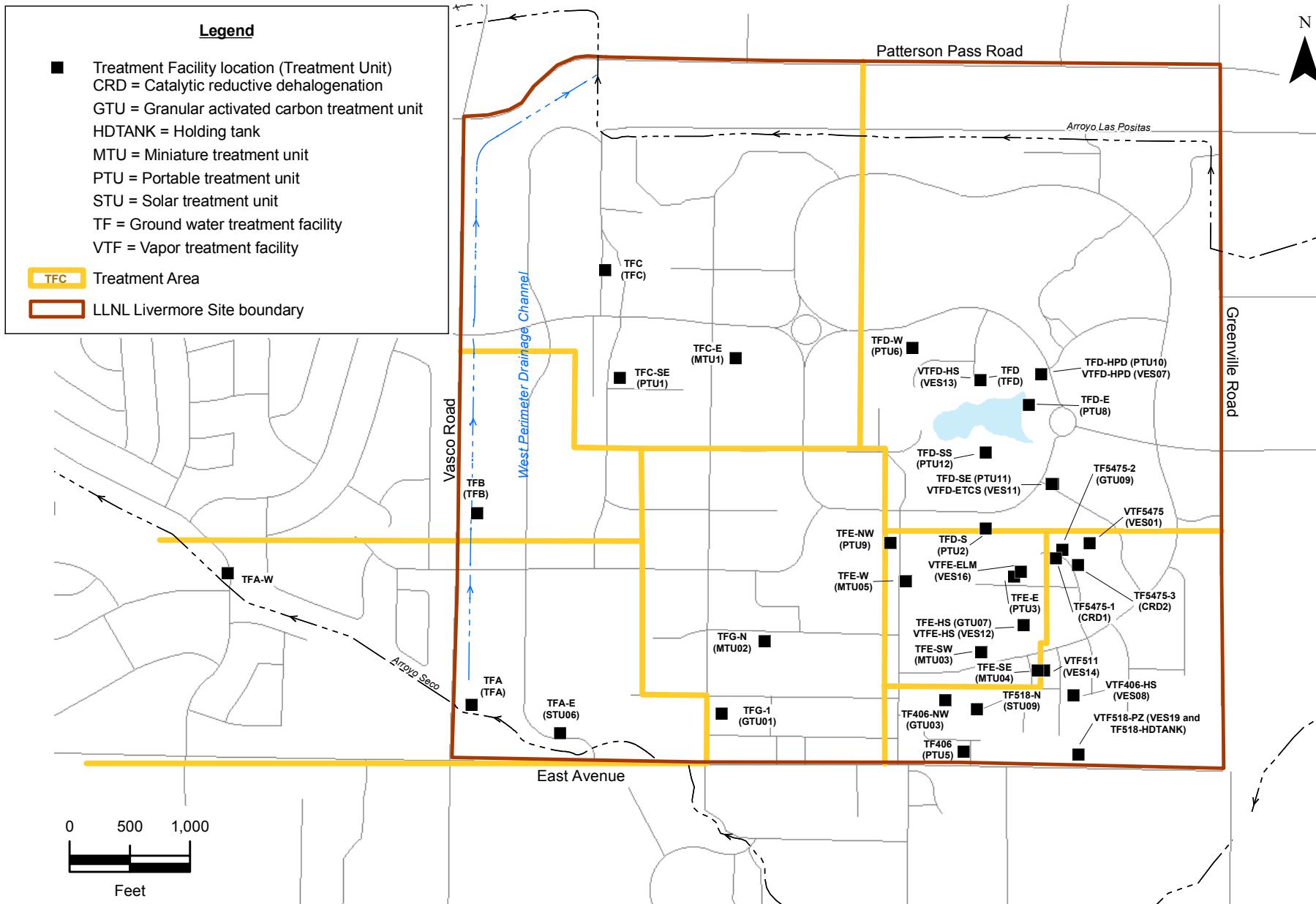


Figure 1. Livermore Site treatment areas and treatment facility locations.

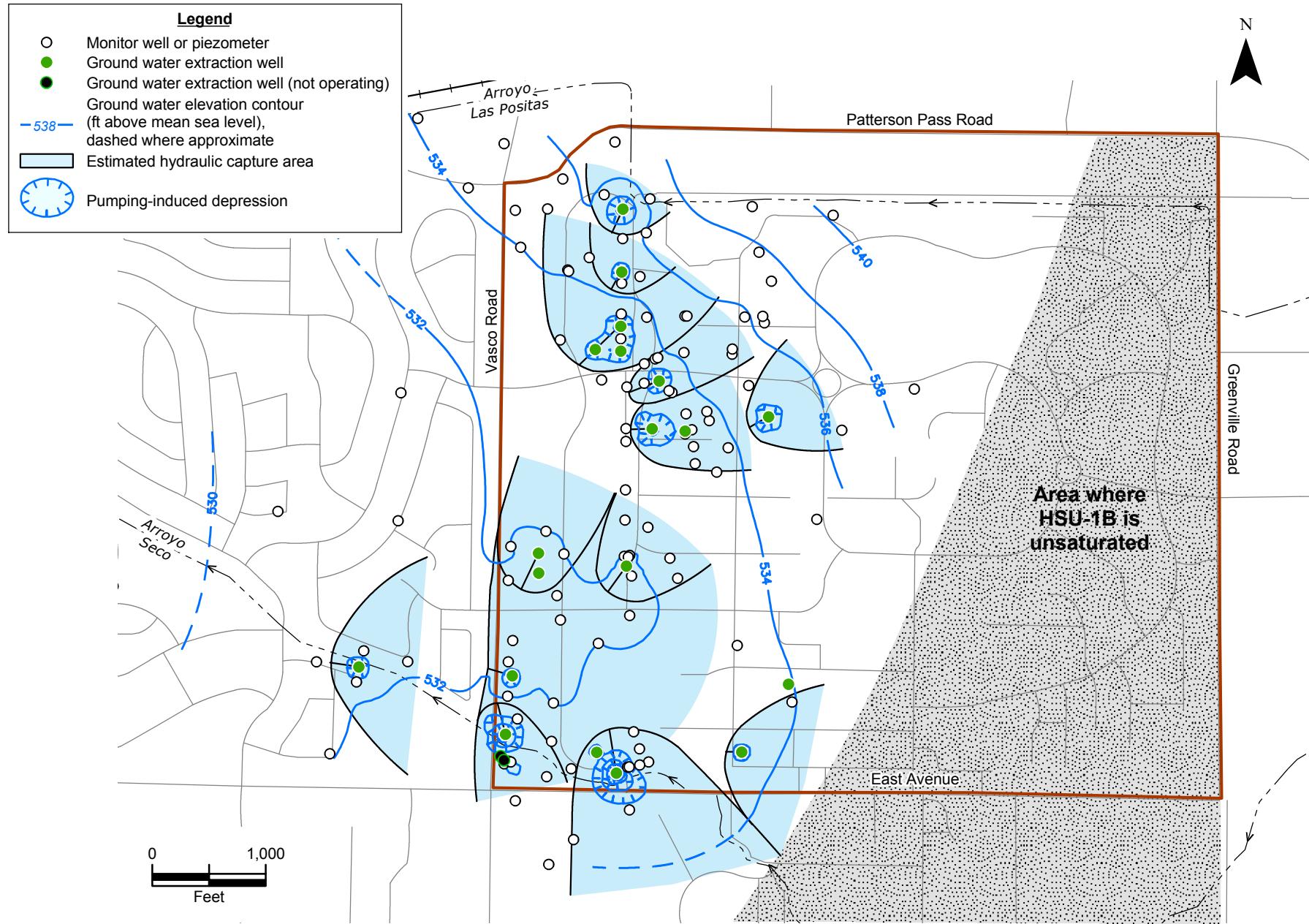
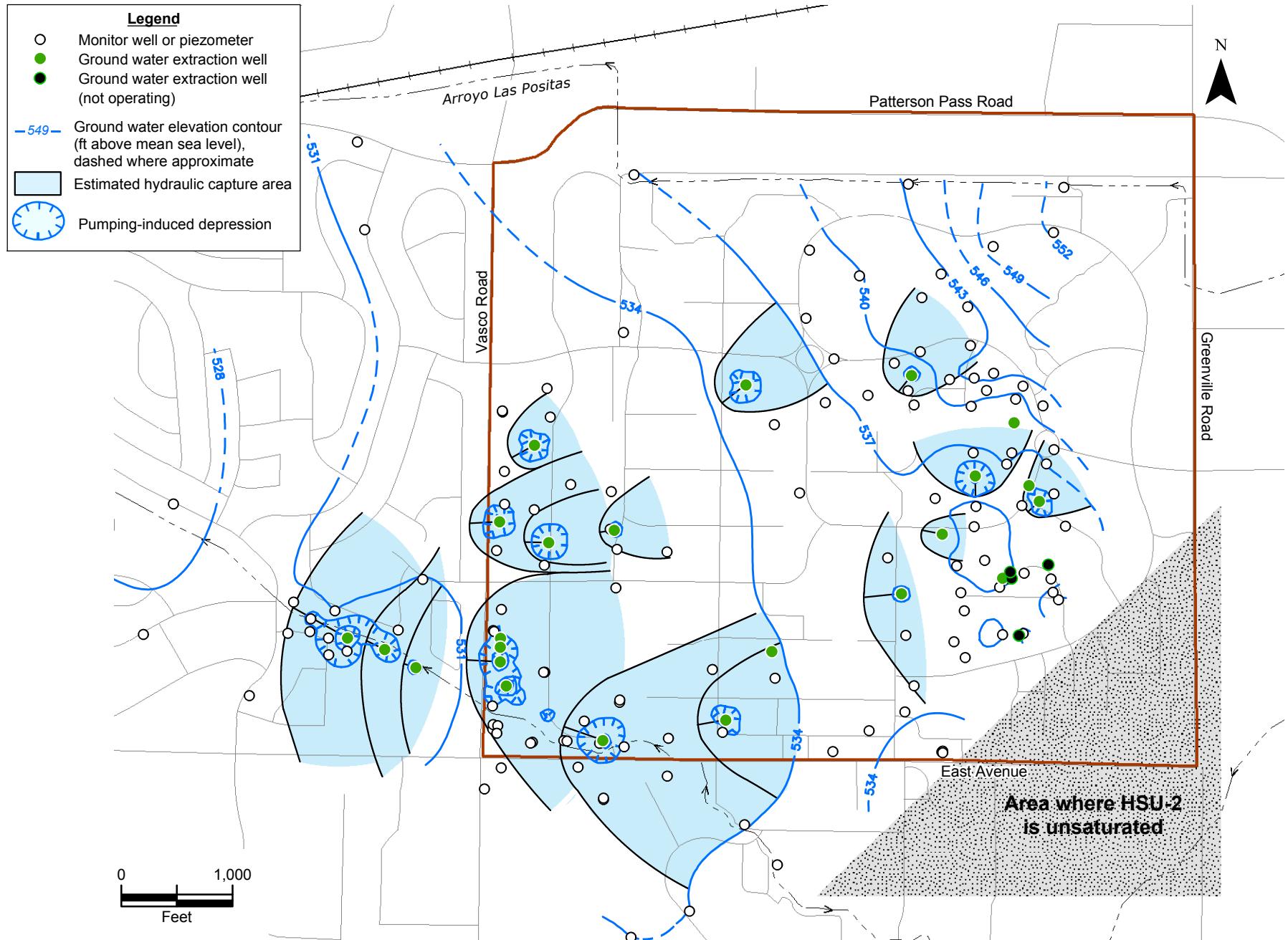


Figure 2. Ground water elevation contour map based on 127 wells completed within HSU-1B showing estimated hydraulic capture areas, LLNL and vicinity, July 2009.



**Figure 3. Ground water elevation contour map based on 159 wells completed within HSU-2 showing estimated hydraulic capture areas, LLNL and vicinity, July 2009.**

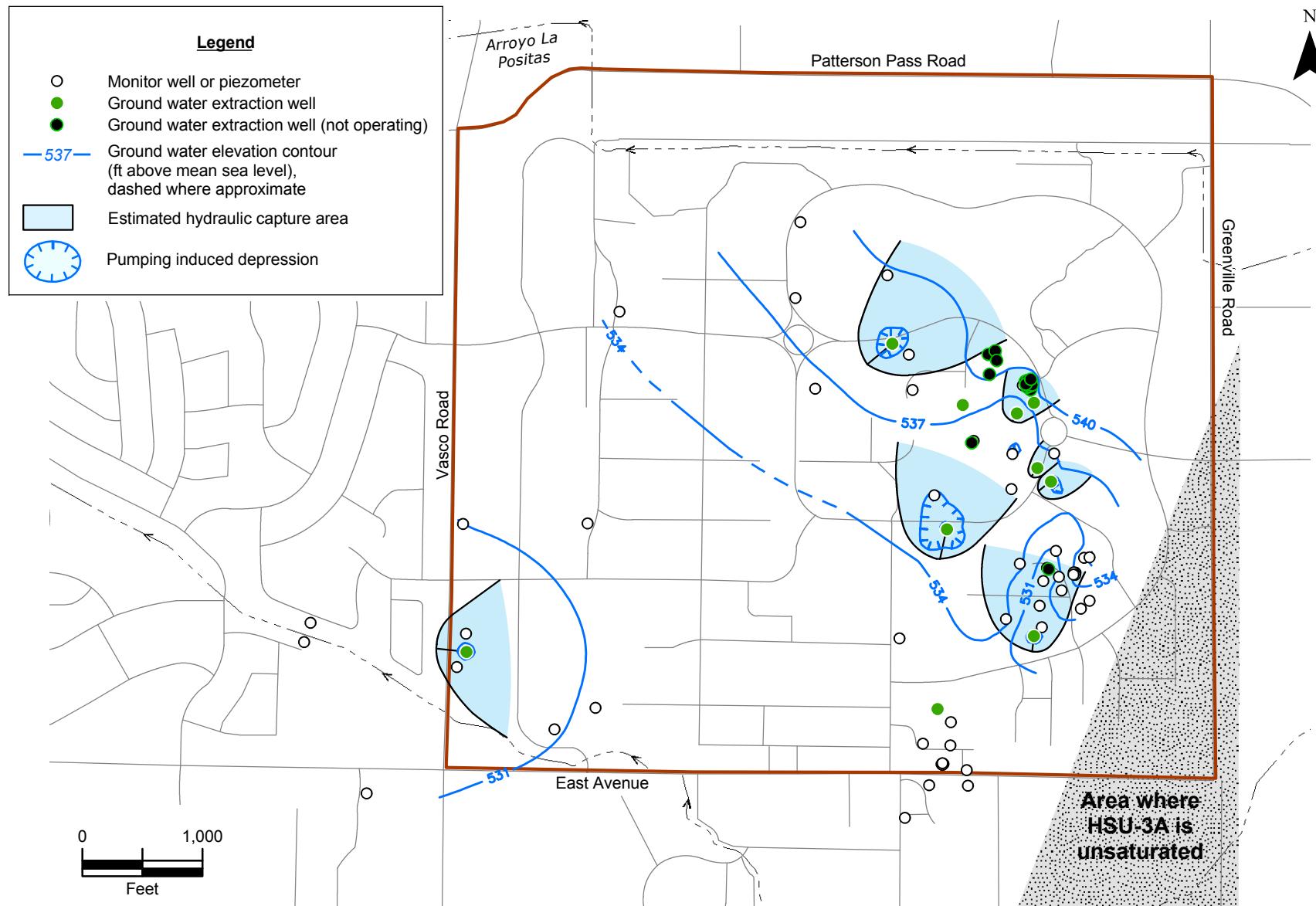
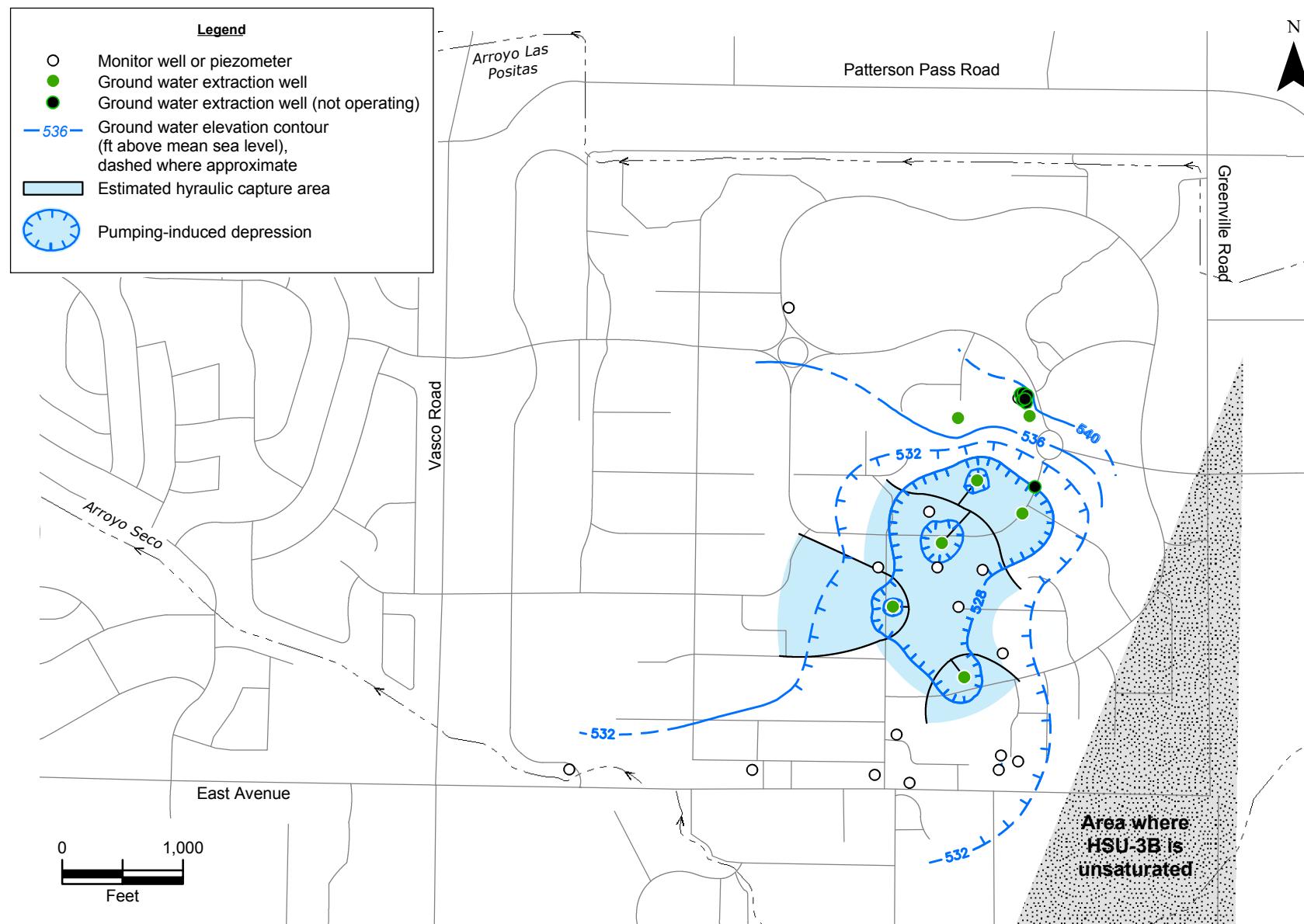
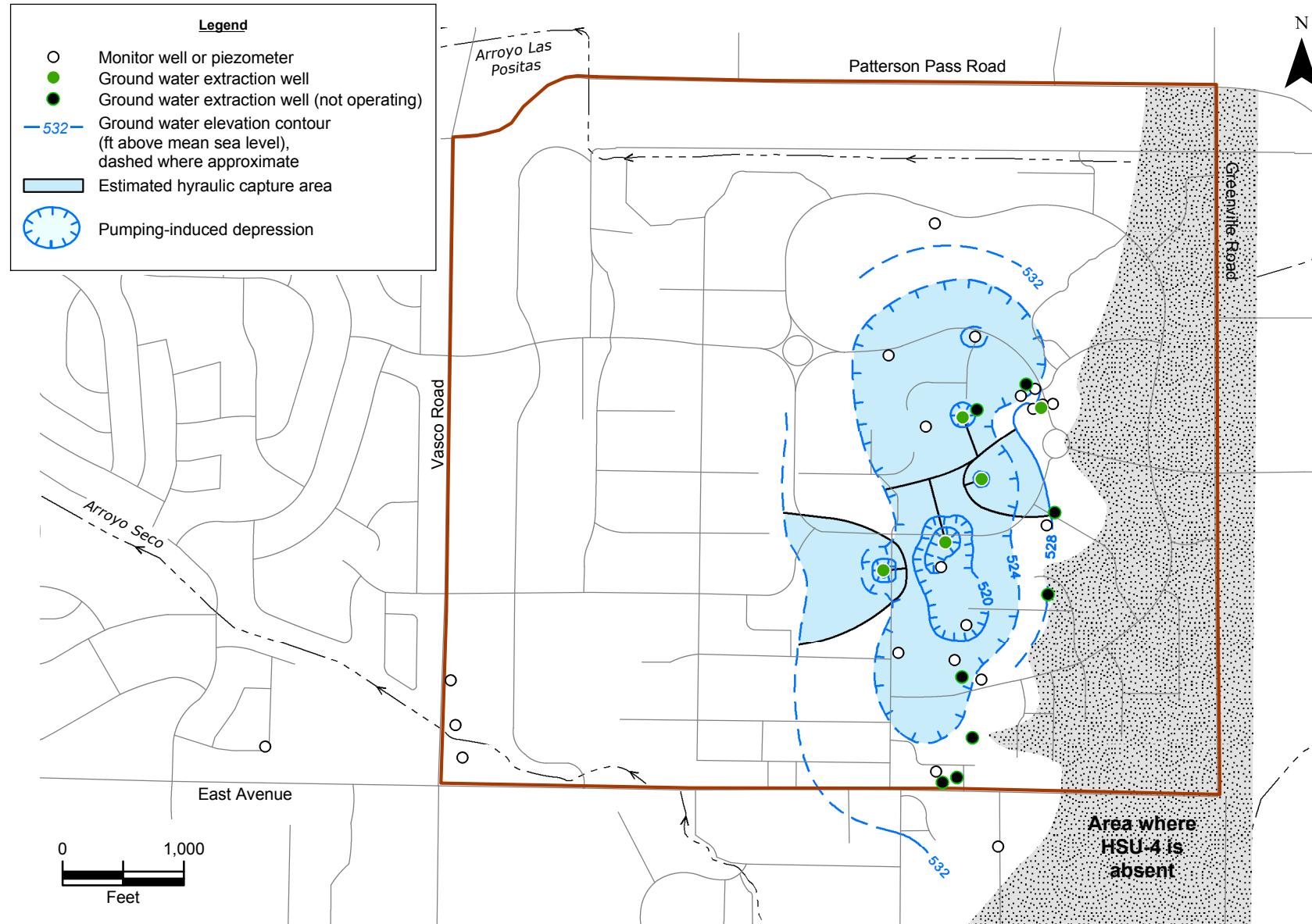


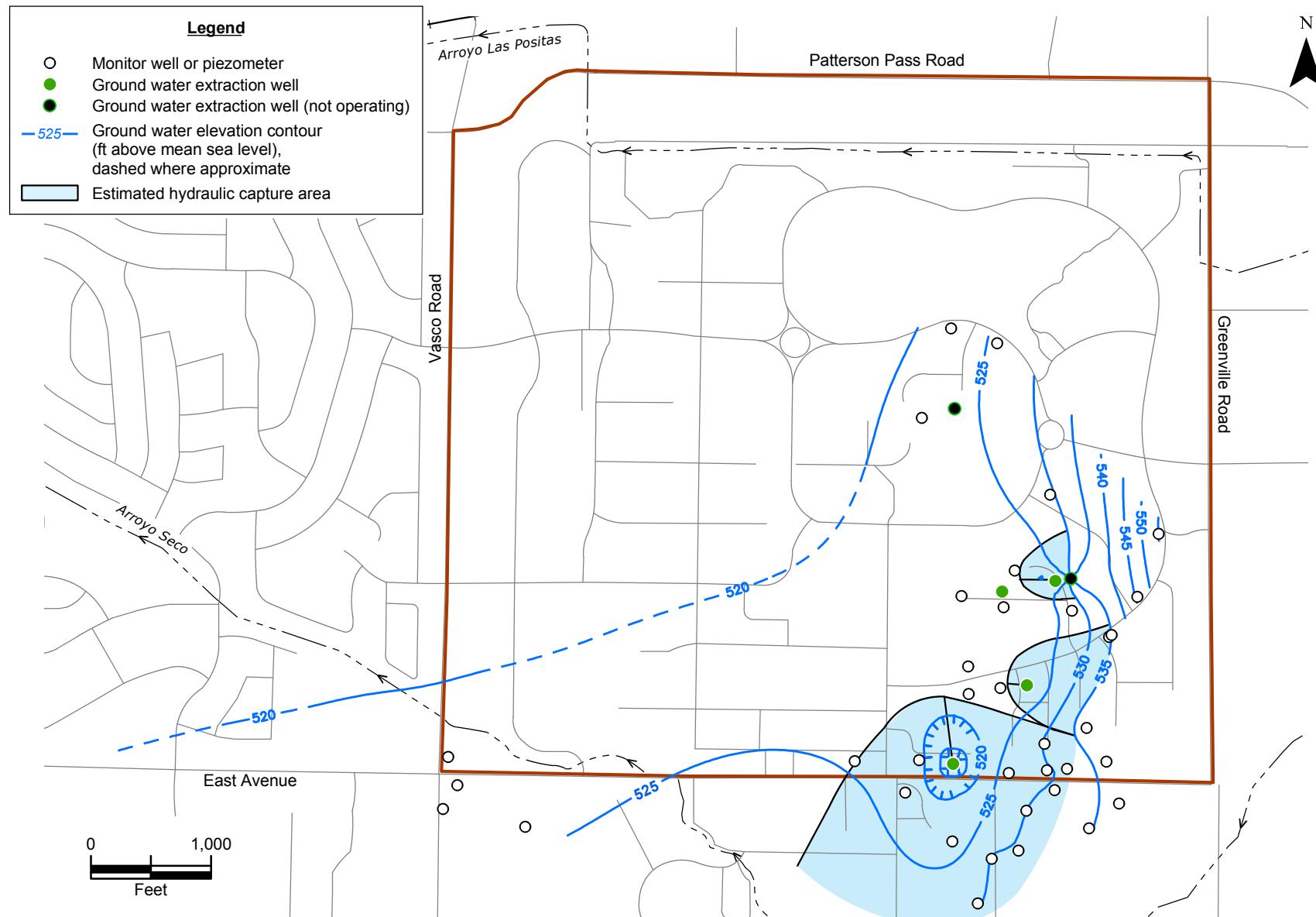
Figure 4. Ground water elevation contour map based on 78 wells completed within HSU-3A showing estimated hydraulic capture areas, LLNL and vicinity, July 2009.



**Figure 5. Ground water elevation contour map based on 31 wells completed within HSU-3B showing estimated hydraulic capture areas, LLNL and vicinity, July 2009.**



**Figure 6. Ground water elevation contour map based on 34 wells completed within HSU-4 showing estimated hydraulic capture areas, LLNL and vicinity, July 2009.**



**Figure 7. Ground water elevation contour map based on 43 wells completed within HSU-5 showing estimated hydraulic capture areas, LLNL and vicinity, July 2009.**